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United States Department of Agriculture,  
MONTHLY LIST OF PUBLICATIONS.

[JANUARY, 1923.]

READ CAREFULLY BEFORE ORDERING.

☞ Send no remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

☞ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

☞ NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Farmers' Telephone Companies: Organization, Financing, and Management.** By I. M. Spasoff and H. S. Beardsley, Junior Economist, Bureau of Agricultural Economics. Pp. 30, figs. 3. December, 1922. (Farmers' Bulletin 1245.)

This bulletin aims to make available information that will assist in the extension of telephone service to rural districts now without it and in the improvement of existing rural service where improvement is needed.

**Nicotine Dust for Control of Truck-Crop Insects.** By Roy E. Campbell, Assistant Entomologist, Truck-Crop Insect Investigations, Bureau of Entomology. Pp. 24, figs. 14. September, 1922. (Farmers' Bulletin 1282.)

This bulletin gives the reasons for adopting nicotine dust as a means of combating truck-crop insects, and tells of what it is composed, the proper time and method of application, and the strength to use. Different types of dusting machinery are described, and the work for which they are best adapted is indicated.

**Lime-sulphur Concentrate, Preparation, Uses, and Designs for Plants.** By E. H. Siegler, Entomologist, Fruit Insect Investigations, Bureau of Entomology, and A. M. Daniels, Mechanical Engineer, Division of Agricultural Engineering, Bureau of Public Roads. Pp. 42, figs. 37. December, 1922. (Farmers' Bulletin 1285.)

Suitable for general distribution.

**Preparation of Fresh Tomatoes for Market.** By F. Earl Parsons, Investigator in Marketing Fruits and Vegetables, Bureau of Agricultural Economics. Pp. 32, figs. 20. December, 1922. (Farmers' Bulletin 1291.)

This bulletin describes handling practices that have proved successful in the preparation of fresh tomatoes for market, as well as some that have been prolific sources of loss.



**The European Corn Borer and Its Control.** By D. J. Caffrey, Assistant in Charge, Corn-Borer Investigations, and L. H. Worthley, Expert in Charge, Corn-Borer Control, Bureau of Entomology. Pp. 45, figs. 24. [January, 1923.] (Farmers' Bulletin 1294.)

This bulletin is intended to supply practical information regarding the European corn borer to corn growers, corn canners, dealers in green vegetables, and market and home gardeners. It supersedes Farmers' Bulletin 1046.

**Choosing a Tractor (for a Corn-Belt Farm).** By L. A. Reynoldson, Junior Farm Economist, Bureau of Agricultural Economics, and H. R. Tolley, Agricultural Engineer, Bureau of Public Roads. Pp. 13, figs. 4. [January, 1923.] (Farmers' Bulletin 1300.)

This bulletin is for the farmer who has decided to purchase a tractor, and is designed to aid him in the proper choice of a machine which will be suitable to his conditions and needs.

**The Common White Wheats.** By J. Allen Clark, Agronomist in Charge, John H. Martin, Agronomist, Western Wheat Investigations, and C. E. Leighty, Agronomist in Charge, Eastern Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 42, figs. 20. December, 1922. (Farmers' Bulletin 1301.)

Describes the different varieties of common white wheats and designates the areas to which they are adapted.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**The Lead-Cable Borer or "Short-Circuit Beetle" in California.** By H. E. Burke, Entomologist, R. D. Hartman, Field Superintendent in Insect Control, and T. E. Snyder, Entomologist, Forest Insect Investigations, Bureau of Entomology. Pp. 56, figs. 15, pls. 10. (Professional Paper.) December 4, 1922. (Department Bulletin 1107.) Price, 20 cents.

Describes the habits and seasonal history of the lead-cable borer, discusses the damage it does to various manufactured articles of metal, and gives the results of control experiments conducted in California and Virginia.

**Sales Methods and Policies of a Growers' National Marketing Agency.** A Study of the Organization and Achievements of Twenty-six Years of Cooperative Marketing by Part of the Cranberry Growers of the United States. By Asher Hobson, Specialist in Market Research, and J. Burton Chaney, one-time Research Agent in Marketing, Bureau of Markets (Columbia University in the City of New York and Bureau of Agricultural Economics cooperating). Pp. 36, figs. 11. Jan. 16, 1923. (Department Bulletin 1109.) Price, 10 cents.

Although this bulletin deals specifically with the marketing of cranberries by cooperative methods, it is not written for the cranberry grower alone. It is addressed to all growers interested in successful marketing methods. It deals with the economic and not the legal aspects of the subject.

**Development of Cooperative Shelter-Belt Demonstrations on the Northern Great Plains.** By Robert Wilson and F. E. Cobb, Assistants in Dry-land Arboriculture, Bureau of Plant Industry. Pp. 28, figs. 15. Jan. 13, 1923. (Department Bulletin 1113.) Price, 10 cents.

Describes the benefits accruing from the planting of trees for shelter-belts as shown by experiments conducted for five years in the Northern Great Plains Area. Of interest to farmers in all portions of the Great Plains Area.

**Natural Control of the Citrus Mealybug in Florida.** By A. T. Speare, Myco-entomologist, Bureau of Entomology. Pp. 18, figs. 2, pl. 1. December, 1922. (Department Bulletin 1117.) Price, 5 cents.

The bulletin shows why in Florida the citrus mealybug is usually unimportant and points out that a knowledge of its natural enemies is of direct economic value to the citrus grower.

**Investigations of Heat Canker of Flax.** By C. S. Reddy and W. E. Brentzel, Assistant Pathologist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 18, figs. 4, pls. 5. (Professional Paper.) October 26, 1922. (Department Bulletin 1120.) Price, 10 cents.

Discusses the cause of heat canker of flax, describes its injury to the plant, and gives remedial measures.

**The Effects of Inbreeding and Crossbreeding on Guinea Pigs. III. Crosses Between Highly Inbred Families.** By Sewall Wright, Senior Animal Husbandman in Animal Genetics, Animal Husbandry Division, Bureau of Animal



Industry. Pp. 61, figs. 27. (Professional Paper.) December, 1922. (Department Bulletin 1121.) Price, 15 cents.

This bulletin is a continuation of studies on the above subject, Parts I and II having been published as Department Bulletin 1090.

**Some New Varieties of Rice.** By Charles E. Chambliss, Agronomist in Charge of Rice Investigations, Office of Cereal Investigations, Bureau of Plant Industry, and J. Mitchell Jenkins, Superintendent, Rice Experiment Station, Crowley, La., and Assistant Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 18, figs. 3, pls. 4. (Professional Paper.) Jan. 12, 1923. (Department Bulletin 1127.) Price, 10 cents.

This bulletin includes a description of the rice plant and a botanical and agronomic description of seven varieties that have been developed in the course of cooperative experiments at the Rice Experiment Station, Crowley, La., and of four varieties now widely grown in this country.

**Significance of Wheat Hairs in Microscopical Examination of Flour.** By George L. Keenan, Microanalyst, Microchemical Laboratory, Bureau of Chemistry. Pp. 8, figs. 5. January 26, 1923. (Department Bulletin 1130.) Price, 5 cents.

Of interest to chemists and food inspectors.

#### CIRCULARS.

**Handbook for Use in the Inspection of Whole-Milk American Cheese Under the Food Products Inspection Law.** By C. W. Fryhofer and Roy C. Potts, Division of Dairy and Poultry Products, Bureau of Agricultural Economics. Pp. 16. January, 1923. (Circular 157, Office of the Secretary.) Price, 5 cents.

**Status and Results of Extension Work in the Southern States, 1903-1921.** By W. B. Mercier, Assistant Chief, Office of Extension Work in the South, States Relations Service. Pp. 38, figs. 12. November, 1922. (Department Circular 248.) Price, 10 cents.

**Tuberculin Testing of Live Stock.** By L. B. Ernest and Elmer Lash, Veterinary Inspectors, Tuberculosis Eradication Division, Bureau of Animal Industry. Pp. 28, figs. 11. December, 1922. (Department Circular 249.) Price, 10 cents.

**Preparation of Peat Composts.** By Alfred P. Dachnowski, Physiologist, Office of Soil Bacteriology Investigations, Bureau of Plant Industry. Pp. 15. December, 1922. (Department Circular 252.) Price, 5 cents.

Describes the different kinds of peat, discusses methods of excavation, and contains directions for composting it with other materials.

#### MISCELLANEOUS.

**Corn Growing in Guam for Club Members.** By W. J. Green, Superintendent of Extension, Guam Agricultural Experiment Station. Pp. 13, pls. 8, figs. 2. January, 1923. (Extension Circular No. 3, Guam Agricultural Experiment Station.) Price 5 cents.

This circular, while written primarily for members of the boys' and girls' clubs of Guam, contains information that should be of service to anyone growing corn on the island.

**Dairying in Porto Rico.** By D. W. May, Agronomist in Charge, Porto Rico Agricultural Experiment Station. Pp. 19, pls. 4. December, 1922. (Bulletin 29, Porto Rico Agricultural Experiment Station.) Price, 5 cents.

Discusses the need for and the possibilities of dairying in Porto Rico.

#### SERIALS.

**Journal of Agricultural Research.** Vol. 23, No. 1, Jan. 6, 1923. Contents: A Phytophthora Footrot of Rheubarb. (G-259.) By George H. Godfrey. Sand Drown, A Chlorosis of Tobacco. (G-260.) By W. W. Garner, J. E. McMurtrey, C. W. Bacon, and E. G. Moss. Parasitism of Sclerotium rolfsii on Irish Potatoes. (G-261.) By H. A. Edson and M. Shapovalov. Examination of Authentic Grape Juices for Methyl Anthranilate. (E-18.) By Frederick B. Power and Victor K. Chesnut. Pp. 1-53, pls. 22, figs. 3. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the Journal was suspended Dec. 1, 1921, and no parts were issued for 1922. The Journal is now being published weekly beginning Jan. 6, 1923, with volume 23, No. 1. The Journal is distributed *free only* to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.



**Experiment Station Record.** Vol. 47, No. 7. November, 1922. Pp. 601-700. Price, 10 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 1 to 5, January 3, 10, 17, 24, and 31, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus.

**Weather, Crops and Markets.** Vol. 3, Nos. 1 to 4, January 6, 13, 20, and 27, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as The Market Reporter, The Monthly Crop Reporter, and the National Weather and Crop Bulletin, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.

#### SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of the Delta Area, Utah.** By A. T. Strahorn, of the U. S. Department of Agriculture, and H. Stucki and D. S. Jennings, of the Utah Agricultural Experiment Station. Pp. 38, pls. 4, fig. 1, map. (From F. O. Soils, 1919.) Price, 15 cents.

**Soil Survey of Kenosha and Racine Counties, Wisconsin.** By W. J. Geib and A. E. Taylor, of the U. S. Department of Agriculture, and J. E. Kubier, H. W. Stewart, and W. M. Gibbs, of the Wisconsin Geological and Natural History Survey. Pp. 58, fig. 1, map. (From F. O. Soils, 1919.) Price, 25 cents.

#### SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Animal Industry.** No. 187. November, 1922. Pp. 125-129. Dec. 29, 1922. Price, 5 cents.

Same. No. 188. December, 1922. Pp. 141-149. January, 1923. Price, 5 cents.

**Bureau of Biological Survey.** No. 51. Regulations for the Protection of Land and Fur-bearing Animals in Alaska. Pp. 1. January, 1923. Price, 5 cents.

**Bureau of Chemistry.** Supplement 148. Notices of Judgments 10851-10900. January, 1923. Price, 5 cents.

Same. Supplement 149. Notices of Judgments 10901-10950. Pp. 501-524. Jan. 4, 1923. Price, 5 cents.

Same. Supplement 150. Notices of Judgments 10951-11000. Pp. 525-552. Jan. 13, 1923. Price, 5 cents.

**Insecticide and Fungicide Board.** No. 42. Notices of Judgments 776-800. Dec. 22, 1922. Price, 5 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

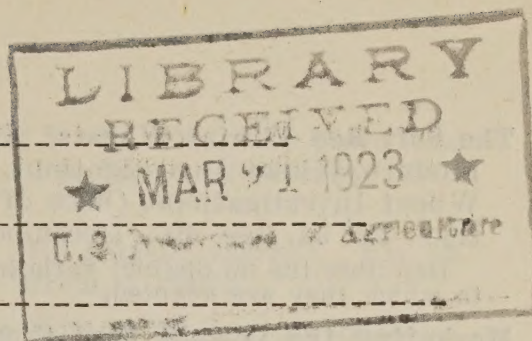
Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Snow and Ice Bulletins** for January 2, 9, 16, 23, and 30, 1923. These bulletins are issued weekly during the winter season, and are based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers.

JOHN L. COBBS, Jr.,  
Chief, Division of Publications.



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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.

[FEBRUARY, 1923.]

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**How to Grow Alfalfa.** By R. A. Oakley and H. L. Westover, Agronomists, Office of Forage-Crop Investigations, Bureau of Plant Industry. Pp. 36, figs. 10. December, 1922. (Farmers' Bulletin 1283.)

Gives a brief history and description of alfalfa and sets forth the necessary directions for its culture. Issued to supersede Farmers' Bulletin 339.

**Organization and Management of Cooperative Live Stock Shipping Associations.** Prepared in the Live Stock, Meats, and Wool Division, Bureau of Agricultural Economics. Pp. 28, figs. 3. February, 1923. (Farmers' Bulletin 1292.)

This bulletin, which supersedes Farmers' Bulletin 718, represents the results of intensive study on the part of several of the representatives of the Bureau of Agricultural Economics in the field of cooperative live-stock marketing and summarizes their combined ideas as to the best method of organizing and operating a cooperative live-stock shipping association.

**What Tractors and Horses Do on Corn-Belt Farms.** By L. A. Reynoldson, Junior Farm Economist, Bureau of Agricultural Economics, and H. R. Tolley, Agricultural Engineer, Bureau of Public Roads. Pp. 14, figs. 9. January, 1923. (Farmers' Bulletin 1295.)

This bulletin discusses the adaptability, inadaptability, and reliability of the tractor and horses for the different farm operations and the form of power most commonly used for each by farmers who already own tractors.

**Changes Effectuated by Tractors on Corn-Belt Farms.** By L. A. Reynoldson, Junior Farm Economist, Bureau of Agricultural Economics, and H. R. Tolley, Agricultural Engineer, Bureau of Public Roads. Pp. 12, figs. 4. (Farmers' Bulletin 1296.)

This bulletin shows the possibilities of reducing man labor and work stock. The changes which may occur in the cropping system, size of fields, and live-stock enterprises are also pointed out.

**Shall I Buy a Tractor? (For a Corn-Belt Farm.)** By L. A. Reynoldson, Junior Farm Economist, Bureau of Agricultural Economics, and H. R. Tolley, Agricultural Engineer, Bureau of Public Roads. Pp. 10, figs. 4. [February, 1923.] (Farmers' Bulletin 1299.)

Discusses the various points to be considered by the farmer who is trying to decide whether to buy a tractor or continue to farm with horses.



**The Soft Red Winter Wheats.** By Clyde E. Leighty, Agronomist in Charge of Eastern Wheat Investigations, and John H. Martin, Agronomist in Western Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 54, figs. 49. December, 1922. (Farmers' Bulletin 1305.)

Describes the 66 distinct varieties of soft red winter wheat and designates the areas to which they are adapted.

**Marketing the Cowpea Seed Crop.** By J. E. Barr, Investigator in Marketing Seeds, Bureau of Agricultural Economics. Pp. 27, figs. 7. (Farmers' Bulletin 1308.)

This bulletin points out some of the methods by which growers may conserve their surplus production of cowpeas, prepare them for market, and sell them in such a way as to return a greater net profit for themselves and to provide an adequate supply of good-quality stock for farmers who find it necessary to buy.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**The Western Yellow Pine Mistletoe, Effect on Growth and Suggestions for Control.** By Clarence F. Korstian, Forest Examiner, Appalachian Forest Experiment Station, Forest Service, and W. H. Long, Forest Pathologist, Office of Investigations in Forest Pathology, Bureau of Plant Industry. Pp. 36, pls. 5, figs. 4. Dec. 21, 1922. (Department Bulletin 1112.) Price, 15 cents.

**Citrus Scab: Its Cause and Control.** By John R. Winston, Pathologist, Office of Fruit-Disease Investigations, Bureau of Plant Industry. Pp. 39, figs. 6, pls. 16. (Professional Paper.) Jan. 26, 1923. (Department Bulletin 1113.) Price, 25 cents.

Results of various spraying experiments conducted to combat citrus scab are included in this bulletin, as well as a description of the disease and a statement as to the conditions influencing its dissemination.

**The Saidy Date of Egypt: A Variety of the First Rank Adapted to Commercial Culture in the United States.** By S. C. Mason, Arboriculturist, Office of Crop Physiology and Breeding Investigations, Bureau of Plant Industry. Pp. 36, figs. 4, pls. 8. (Professional Paper.) February, 1923. (Department Bulletin 1125.) Price, 15 cents.

Discusses the suitability of the Saidy date as a variety to be grown commercially in the United States.

**The Formation and Pathological Anatomy of Frost Rings in Conifers Injured by Late Frosts.** By Arthur S. Rhoads, formerly Assistant in Forest Pathology, Office of Investigations in Forest Pathology, Bureau of Plant Industry. Pp. 16, pls. 6. (Professional Paper.) February 13, 1923. (Department Bulletin 1131.) Price, 10 cents.

A technical discussion of the defects which appear in grown pine trees when the conifers have been injured by frost. Of interest to investigators in diseases of conifers.

**Vitamin B in the Edible Tissues of the Ox, Sheep, and Hog.** I. Vitamin B in the Voluntary Muscle. II. Vitamin B in the Edible Viscera. By Ralph Hoagland, Senior Biochemist, Biochemic Division, Bureau of Animal Industry. Pp. 48, figs. 45. (Professional Paper.) Feb. 10, 1923. (Department Bulletin 1138.) Price, 10 cents.

Of interest to dietitians.

**Comparative Spinning Tests of Superior Varieties of Cotton (Grown Under Weevil Conditions in the Southeastern States; Crop of 1921).** By William R. Meadows, Cotton Technologist, and William G. Blair, Specialist in Cotton Testing, Bureau of Agricultural Economics. Pp. 7. Feb. 1, 1923. (Department Bulletin 1148.) Price, 5 cents.

Describes spinning tests conducted to determine the relative spinning value of cotton commercially thought to be of superior character with that of a number of pure strains of superior varieties of cotton.

#### CIRCULARS.

**List of Serials Currently Received in the Library of the U. S. Department of Agriculture, January 1, 1922.** Prepared by Margaret T. Olcott, Assistant Chief of the Periodical Division, and Emma B. Hawks, Assistant Librarian. Pp. 358. [February, 1923.] (Department Circular 187.) For sale only. Price, 25 cents.

This list does not include U. S. Government publications and publications of the State Agricultural Colleges and Experiment Stations. It is arranged by title, by subject, and by region.



**Forest Fires in California, 1911-1920: An Analytical Study.** By S. B. Snow and E. I. Kotok, Forest Examiners, Forest Service. Pp. 80, il. February, 1923. (Department Circular 243.) Price, 15 cents.

**Statistics of Cooperative Extension Work, 1922-23.** By Eugene Merritt. Pp. 19. February 1, 1923. (Department Circular 253.) Price, 5 cents.

**History and Seed Production of Purple Vetch.** By Roland McKee, Agronomist, Office of Forage-Crop Investigations, Bureau of Plant Industry. Pp. 5, fig. 1. February, 1923. (Department Circular 256.) Price, 5 cents.

#### MISCELLANEOUS.

**The Relation of Agricultural Education to Farm Organizations.** Address of C. W. Pugsley, Assistant Secretary of Agriculture, Before Annual Meeting, American Farm Bureau Federation, at Chicago, Dec. 14, 1922. (Miscellaneous Circular No. 3.) Price, 5 cents.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry, during the period from January 1 to March 31, 1920.** Pp. 96, pls. 8. February 14, 1923. (Inventory No. 62; Nos. 49124 to 49796. Price, 20 cents.

**Cooperative Extension Work, 1921.** Pp. 46. Prepared by the States Relations Service. Price, 5 cents.

#### SERIALS.

**Journal of Agricultural Research.** Vol. 23. No. 2. Jan. 13, 1923. Contents: Effect of Various Inorganic Nitrogen Compounds. Applied at Different Stages of Growth, on the Yield, Composition, and Quality of Wheat (E-19). By Jehiel Davidson and J. A. Le Clerc.—Poisonous Properties of *Bikukulla cucullaria* (Dutchman's Breeches) and *B. canadensis* (Squirrel Corn) (G-262). By O. F. Black, W. W. Eggleston, J. W. Kelly, and H. C. Turner.—Forcing the Germination of Freshly Harvested Wheat and Other Cereals (G-263). By George T. Harrington.—A New and Efficient Respirometer for Seeds and Other Small Objects: Directions for Its Use (G-264). By George T. Harrington and William Crocker.—Respiration of Apple Seed (G-265). By George T. Harrington. Pp. 1-130, pls. 2, figs. 2. Price, 10 cents.

**Same.** Vol. 23, No. 3, January 20, 1923. Contents: Cytological Study of Infection of Baart and Kanred Wheats by *Puccinia graminis tritici*. (G-266.) By Ruth F. Allen.—After-Ripening and Germination of Apple Seeds. (G-267.) By George T. Harrington and Bertha C. Hite.—Miscellaneous Tests of Carbon Tetrachlorid as an Anthelmintic. (A-63.) By Maurice C. Hall and Jacob E. Shillinger.—Structure, Physical Characteristics, and Composition of Pericarp and Integument of Johnson Grass Seed in Relation to Its Physiology. (G-268.) By George T. Harrington and William Crocker.—Probable Cause of the Toxicity of the So-Called Poisonous Greensand. (G-269.) By J. W. Kelly. Pp. 131-228, figs. 10, pls. 9. Price, 10 cents.

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**Experiment Station Record.** Vol. 46. Index Number. January-June, 1922. Pp. 901-996. Price, 10 cents.

**Same.** Vol. 47. No. 8. Pp. 701-799. December, 1922. Price, 10 cents.

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## SOIL SURVEYS.

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**Soil Survey of Kootenai County, Idaho.** By H. G. Lewis, of the U. S. Department of Agriculture, and W. A. Denecke, jr., of the University of Idaho. Pp. 45, pls. 4, figs. 2, map 1. (From *F. O. Soils*, 1919.) Price, 15 cents.

## SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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**Bureau of Chemistry.** No. 28. Pp. 35-41. Feb. 14, 1923. Price, 5 cents.

**Same.** Supplement 151. Notices of Judgments 11001-11050. Pp. 1-27. January 1923. Price, 5 cents.

**Same.** Supplement 152. Notices of Judgments 11051-11100. Pp. 29-55. Feb. 21, 1923. Price, 5 cents.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 50, No. 10. October, 1922. Pp. 515-565, figs. 24, pls. 2, charts 12. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents. Special articles: Progress in radiation measurements. By C. Dorno.—Influence of cover crops on orchard temperatures. By F. D. Young.—A second experiment on cover crops.—Calculating temperature extremes in Spokane County, Wash. By E. M. Keyser.—Forecasting minimum temperatures for the cranberry bogs of New Jersey. By G. S. Bliss.—A simple geometric derivation of the laws of refraction of light inclined to a principal plane of a prism. By W. J. Humphreys.—Rare halo of abornal radius. By A. F. Piippo.—Certain unusual halos. By W. J. Humphreys.—On the lower oblique arcs of the anthelion. By E. W. Woolard.—Hayford on effects of wind and barometric pressure on the Great Lakes. By A. J. Henry.

**Same.** Vol. 50, No. 11. November, 1922. Pp. 567-613, figs. 12, charts 13. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents. Special articles: Influence of the weather on the yield of crops. By J. Warren Smith.—The daily quantities in which summer precipitation is received. By J. S. Cole.—Note on atmospheric humidity in the United States. By R. DeC. Ward.—Cause of the accelerated sea breeze over Corpus Christi, Texas. By J. P. McAuliffe.—Does the formation of abnormally heavy ice in the Bering Sea cause famine in northern Japan? A review. By J. B. Kincer.—Notes on typhoons, with charts of normal and aberrant tracks. By S. S. Visher.—The changing Arctic. By G. N. Ifft.—Birds storm-swept over the North Atlantic Ocean. By W. E. Hurd.—Mossman on the physical condition of the South Atlantic during summer. By H. H. Clayton.

NOTE.—The Monthly Weather Review is sent free to cooperating meteorological services, universities, and institutions of learning which offer courses of instruction in meteorology, and to a limited number of individuals and students interested in the science of meteorology who make application for the Review, addressed to the Chief of the U. S. Weather Bureau and showing sufficient reasons why they should receive copies free of cost.

**Snow and Ice Bulletins** for February 6, 13, 20, and 27, 1923. These bulletins are issued weekly during the winter season, and are based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers.

JOHN L. COBBS, Jr.,  
Chief, Division of Publications.



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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.


[MARCH, 1923.]

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
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 Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

 NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Duck raising.** By Alfred R. Lee, Poultryman, and Sheppard Haynes, Junior Poultryman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 22, figs. 15. Revised January, 1923. (**Farmers' Bulletin 697.**)

Suitable for general distribution.

**Horse-Breeding Suggestions for Farmers.** By H. H. Reese, Animal Husbandman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 20, figs. 10. Revised January, 1923. (**Farmers' Bulletin 803.**)

**Destroy the Common Barberry.** By E. C. Stakman, Pathologist and Agent, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 15, figs. 9. Revised February, 1923. (**Farmers' Bulletin 1058.**)

The statements made in this bulletin apply in general to the grain-growing sections of the northern half of the United States east of the Rocky Mountains.

**Potato Production in the South.** By William Stuart, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 39, figs. 22. Revised January, 1923. (**Farmers' Bulletin 1205.**)

**Cost of Using Tractors on Corn-Belt Farms.** By L. A. Reynoldson, Junior Farm Economist, Bureau of Agricultural Economics, and H. R. Tolley, Agricultural Engineer, Bureau of Public Roads. Pp. 14, figs. 6. (**Farmers' Bulletin 1297.**) Price, 5 cents.

**Cost of Using Horses on Corn-Belt Farms.** By M. R. Cooper, Assistant Farm Economist, Bureau of Agricultural Economics, and J. O. Williams, Senior Animal Husbandman, Bureau of Animal Industry. Pp. 16, figs. 4. [March, 1923.] (**Farmers' Bulletin 1298.**)

This bulletin shows the cost of keeping horses on corn-belt farms and the cost of the power which they furnish, and discusses the possibilities of reducing these costs.



**The Club Wheats.** By J. Allen Clark, Agronomist in Charge, and John H. Martin, Agronomist, Western Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 18, figs. 12. January, 1923. (**Farmers' Bulletin 1303.**)

Describes the different varieties of club wheats and designates the areas to which they are adapted.

**Quack Grass.** By L. W. Kephart, Assistant Agronomist, Office of Forage-Crop Investigations, Bureau of Plant Industry. Pp. 32, figs. 15. March, 1923. (**Farmers' Bulletin 1307.**)

This bulletin describes methods for the eradication of quack grass, also suggests its use as a forage and silage crop.

**Control of the Common Mealybug on Citrus in California.** By Arthur D. Borden, Assistant Entomologist, Fruit Insect Investigations, Bureau of Entomology. Pp. 11, figs. 5. February, 1923. (**Farmers' Bulletin 1309.**)

Supersedes Farmers' Bulletin 862.

**The Corn Earworm: Its Ravages on Field Corn and Suggestions for Control.** By W. J. Phillips, Entomologist, and Kenneth M. King, Scientific Assistant, Cereal and Forage Insect Investigations, Bureau of Entomology. Pp. 18, figs. 18. January, 1923. (**Farmers' Bulletin 1310.**)

This bulletin describes the different stages of the insect, and shows how it damages corn, how it is partly kept in check by its own habits and its natural enemies, and how a knowledge of its life history will aid the corn grower in protecting his crop.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**The Results of Physical Tests of Road-Building Rock from 1916 to 1921, Inclusive.**

Prepared in the Bureau of Public Roads. Pp. 52. (Professional Paper.) March 21, 1923. (**Department Bulletin 1132.**) Price, 10 cents.

Replaces Department Bulletin 670, "Results of Tests of Road-Building Rock in 1916 and 1917."

**The Freezing Temperatures of Some Fruits, Vegetables, and Cut Flowers.** By R. C. Wright, Physiologist, and George F. Taylor, Associate Physicist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 8. February 28, 1923. (**Department Bulletin 1133.**) Price, 5 cents.

Of interest to persons engaged in commercial cold-storage and precooling practices.

**Symptoms of Wheat Rosette Compared With Those Produced by Certain Insects.**

By Harold H. McKinney, Assistant Pathologist, Office of Cereal Investigations, Bureau of Plant Industry, and Walter H. Larrimer, Scientific Assistant, Office of Cereal and Forage Insect Investigations, Bureau of Entomology. Pp. 8, pls. 4. (Professional Paper.) March 22, 1923. (**Department Bulletin 1137.**) Price, 5 cents.

This bulletin deals with the disease previously designated take-all and so-called take-all which occurs in Illinois and Indiana.

**Cost of Milk Production on Forty-Eight Wisconsin Farms.** By S. W. Mendum, Junior Economist, Bureau of Agricultural Economics. Pp. 23, figs. 2. March 20, 1923. (**Department Bulletin 1144.**) Price, 5 cents.

Gives the results of a study made of the management of a number of herds kept under ordinary farm conditions, with a view to determining the nature and degree of changes in management which may be expected to result in a more favorable relation between income and expense as prices of materials and of products change.

#### CIRCULARS.

**Composition of Filter Press (Lime) Cake.** By Sidney F. Sherwood, Chemist, Office of Sugar-Plant Investigations, Bureau of Plant Industry. Pp. 3. February, 1923. (**Department Circular 257.**) Price, 5 cents.

**Commercial Control of Citrus Melanose.** By John R. Winston, Pathologist, and John J. Bowman, Junior Pathologist, Office of Fruit-Disease Investigations, Bureau of Plant Industry. Pp. 8. March, 1923. (**Department Circular 259.**) Price, 5 cents.

**Annual Report of the Governor of Alaska on the Alaska Game Law, 1922.** Pp. 7. March 1, 1923. (**Department Circular 260.**) Price, 5 cents.

**Length of the Dormancy Period of the Sugar-Beet Nematode in Utah.** By Gerald Thorne, Assistant Nematologist, Office of Sugar-Plant Investigations, Bureau of Plant Industry. Pp. 5. February, 1923. (**Department Circular 262.**) Price, 5 cents.



## REPORTS.

**Report of the Chief of the Weather Bureau, 1921-1922.** Pp. 277, charts 7. [March, 1923.] Price, \$1.00. Cloth.

## SERIALS.

**Journal of Agricultural Research.** Vol. 23. No. 4. January 27, 1923. Contents: Two Important New Types of Citrus Hybrids for the Home Garden: Citrangequats and Limequats. (G-270.) By Walter T. Swingle and T. Ralph Robinson.—Production and Dispersal of Conidia in the Philippine Sclerosporas of Maize. (G-271.) By William H. Weston, Jr.—Mechanics of Inoculation with Sugar-Cane Mosaic by Insect Vectors. (G-272.) By E. W. Brandes.—Relation of Potato Skinspot to Powdery Scab. (G-273.) By Michael Shapovalov. Pp. 229-294, pls. 21, figs. 3. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the Journal was suspended Dec. 1, 1921, and no parts were issued for 1922. The Journal is now being published weekly beginning Jan. 6, 1923, with volume 23, No. 1. The Journal is distributed *free only* to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Vol. 47, No. 9. Abstract Number. February 10, 1923. Pp. 801-900. Price, 10 cents.

**Same.** Vol. 48, No. 1. January, 1923. Pp. 1-100. Price, 10 cents.

**Same.** Vol. 48, No. 2. February, 1923. Pp. 101-200. Price, 10 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 10 to 13, March 7, 14, 21, and 28, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. Beginning April 1, a subscription list for it will be established by the Superintendent of Documents, Government Printing Office, Washington, D. C., the price being 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.

**Weather, Crops, and Markets.** Vol. 3, Nos. 9 to 12, March 3, 10, 17, 24, and 31, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as The Market Reporter, The Monthly Crop Reporter, and the National Weather and Crop Bulletin, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.

## SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of Washington County, Oregon.** By E. C. Eckmann and E. B. Watson of the U. S. Department of Agriculture, and A. L. Fluharty and C. V. Ruzek of the Oregon Agricultural Experiment Station. Pp. 51, fig. 1, pl. 1, map. (From F. O. Soils, 1919.) Price, 25 cents.

## SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Animal Industry.** No. 189. January, 1923. Pp. 1-18. February 27, 1923. Price, 5 cents.

**Same.** No. 190. February, 1923. Pp. 19-26. March 23, 1923. Price, 5 cents.

**Bureau of Biological Survey.** No. 53. Regulations for the Protection of Game in Certain Localities in Alaska. Pp. 3. March 24, 1923. Price, 5 cents.

**Bureau of Chemistry.** Supplement 153. Notices of Judgments 11101-11150. Pp. 57-83. March, 1923. Price, 5 cents.

**Federal Horticultural Board.** No. 73. July-December, 1922. Pp. 101-141. March 3, 1923. Price, 5 cents.



## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 50, No. 12. December, 1922. [Mar. 9, 1923.] Pp. 615-676, figs. 40, charts 15. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: Daylight illumination on horizontal, vertical, and sloping surfaces. By H. H. Kimball and I. F. Hand.—Some meteorological aspects of the ice patrol work in the North Atlantic. By E. H. Smith.—Polar ice-drift and sunspots. By G. N. Ifft.—A review of Geophysical Memories No. 19. By A. J. Henry.—Relation of weather conditions to wireless audibility. By M. P. Brünig.—The connection between pressure and temperature in the upper layers of the atmosphere. By W. H. Dines.—Average free-air winds at Lansing, Mich. By C. L. Ray. Note by W. R. Gregg.—Relation of crop yields to quantity of irrigation water in southwestern Kansas. By J. B. Kincer.—The weather of 1922. By A. J. Henry.

NOTE.—The Monthly Weather Review is sent free to cooperating meteorological services, universities, and institutions of learning which offer courses of instruction in meteorology, and to a limited number of individuals and students interested in the science of meteorology who make application for the Review, addressed to the Chief of the U. S. Weather Bureau and showing sufficient reasons why they should receive copies free of cost.

**Same.** Supplement No. 22. The Spring Floods of 1922. Pp. 1-29, charts 15, il. [March, 1923.] Price, 25 cents.

**Snow and Ice Bulletins** for March 6, 13, 20, and 27, 1923. These bulletins are issued weekly during the winter season, and are based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers.

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**Breeds of Sheep for the Farm.** By F. R. Marshall, Collaborator in Sheep and Goat Investigations, Animal Husbandry Division, Bureau of Animal Industry. Pp. 20, figs. 10. Revised March, 1923. (Farmers' Bulletin 576.)

**Corn and Its Uses as Foods.** Prepared in the Office of Home Economics, States Relations Service. Pp. 27, figs. 5. February, 1923. (Farmers' Bulletin 1236.) Price, 10 cents.

Deals with the value of corn as human food and gives practical suggestions and recipes for using corn preparations in a variety of ways.

**The Durum Wheats.** By J. Allen Clark, Agronomist in Charge, and John H. Martin, Agronomist, Western Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 16, figs. 5. January, 1923. (Farmers' Bulletin 1304.)

Describes the different varieties of durum wheats and designates the areas to which they are adapted.

**Insect Enemies of Chrysanthemums.** By Charles A. Weigel, Entomologist, Greenhouse Insect Investigations, Bureau of Entomology. Pp. 36, figs. 33. February 23, 1923. (Farmers' Bulletin 1306.)

This bulletin gives information relating to the life histories and habits of the more important pests attacking chrysanthemums and suggests practical control measures.

**Tree Planting in the Great Plains Region.** By Fred R. Johnson, Forest Examiner, Forest Service, and F. E. Cobb, Assistant in Dry-Land Arboriculture, Bureau of Plant Industry. Pp. 33, figs. 18. (Farmers' Bulletin 1312.)

Contains directions for planting trees in the Great Plains region and describes the advantages derived therefrom.



**Good Proportions in the Diet.** By Caroline L. Hunt, Specialist, Office of Home Economics, States Relations Service. Pp. 24, figs. 5. March, 1923. (Farmers' Bulletin 1313.)

Suitable for general distribution. Supersedes Farmers' Bulletin 1228.

**Motor Trucks on Corn Belt Farms.** By H. R. Tolley, Agricultural Engineer, and L. M. Church, Assistant in Agricultural Engineering, Division of Agricultural Engineering, Bureau of Public Roads. Pp. 18, figs. 8. March, 1923. (Farmers' Bulletin 1314.)

This bulletin is designed to be of assistance to farmers in the Corn Belt region in determining whether or not they can use trucks profitably, and to assist men who already own trucks in determining whether or not they are using their machines as efficiently as others.

**Cleaning Milking Machines.** By L. H. Burgwald, Assistant Market Milk Specialist, Dairy Division, Bureau of Animal Industry. Pp. 16, figs. 13. March, 1923. (Farmers' Bulletin 1315.)

Contains directions for cleaning milking machines, and points out the necessity for proper cleaning if milk of a low bacterial content is to be produced.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**Use of Water by Spring Wheat on the Great Plains.** By John S. Cole, Agronomist, and O. R. Mathews, Assistant Agronomist in Dry-Land Agriculture, with an introduction by E. C. Chilcott, Agriculturist in Charge of the Office of Dry-Land Agriculture Investigations, Bureau of Plant Industry. Pp. 34, figs. 10. (Professional Paper.) March 31, 1923. (Department Bulletin 1004.) Price, 10 cents.

**Lumber Cut of the United States 1870-1920.** Declining Production and High Prices as Related to Forest Exhaustion. By R. V. Reynolds, Forest Examiner, and Albert H. Pierson, Statistician in Forest Products, Forest Service. (Professional Paper.) Pp. 63, figs. 16, pls. 2. April 25, 1923. (Department Bulletin 1119.) Price, 15 cents.

**Storage of Water in Soil and Its Utilization by Spring Wheat.** By O. R. Mathews, Assistant Agronomist, with introduction by E. C. Chilcott, Agriculturist in Charge, Office of Dry-Land Agriculture Investigations, Bureau of Plant Industry. Pp. 28, fig. 1. (Professional Paper.) April 14, 1923. (Department Bulletin 1139.) Price, 5 cents.

**The Deterioration of Felled Western Yellow Pine on Insect-Control Projects.** By J. S. Boyce, Pathologist, Office of Investigations in Forest Pathology, Bureau of Plant Industry. Pp. 8, fig. 1. (Professional Paper.) March 29, 1923. (Department Bulletin 1140.) Price, 5 cents.

Studies to determine the rate of deterioration of felled western yellow pine have been made and the results published in this bulletin.

**The Barrier Factors in Gipsy Moth Tree-Banding Material.** By M. T. Smulyan, Specialist, Gipsy Moth and Brown-Tail Moth Investigations, Bureau of Entomology. Pp. 16. March 30, 1923. (Department Bulletin 1142.) Price, 5 cents.

**Dry-Land Pasture Crops for Hogs at Huntley, Mont.** By A. E. Seamans, Assistant Agronomist, Office of Dry-Land Agriculture Investigations, Bureau of Plant Industry. Pp. 24, figs. 3. April 10, 1923. (Department Bulletin 1143.) Price, 5 cents.

Deals with experiments which were conducted with a view to collecting agronomic data bearing on the seasons at which the different crops become available for grazing by hogs, the number that can be supported per acre, systematic crop rotation which will make for continuous grazing, and the result of pasturing on the yield of crops.

**The Influence of Copper Sprays on the Yield and Composition of Irish Potato Tubers.** By F. C. Cook, Physiological Chemist, Insecticide and Fungicide Laboratory, Miscellaneous Division, Bureau of Chemistry. Pp. 27. April 5, 1923. (Department Bulletin 1146.) Price, 5 cents.



## CIRCULARS.

**Federal Legislation, Regulations, and Rulings Affecting Land-Grant Colleges and Experiment Stations.** Compiled in the States Relations Service. Pp. 50. March 28, 1923. (Department Circular 251.) Price, 5 cents.

**Homemade Apple and Citrus Pectin Extracts and Their Use in Jelly Making.** By Minna C. Denton, Ruth Johnstin, and Fanny Walker Yeatman, Office of Home Economics, States Relations Service. Pp. 11. March, 1923. (Department Circular 254.) Price, 5 cents.

This circular describes household methods for extracting pectin from apples and the white peel of oranges and lemons, and gives recipes for the making of several typical kinds of jelly by the addition of these extracts.

**Turpentine and Rosin. Distribution of the World's Production, Trade, and Consumption.** By V. E. Grotlisch, Assistant Chemist, Naval Stores Investigations, Bureau of Chemistry. Pp. 13. (Department Circular 258.) Price, 5 cents.

**The Purpose of Bird Censuses and How to Take Them.** By May Thacher Cooke, Assistant in Biological Investigations, Bureau of Biological Survey. Pp. 4. April, 1923. (Department Circular 261.) Price, 5 cents.

**Dispersion of the Boll Weevil in 1922.** By F. F. Bondy, R. C. Gaines, W. B. Williams, and M. T. Young, Bureau of Entomology. Pp. 6, fig. 1. April, 1923. (Department Circular 266.) Price, 5 cents.

**Kill the Common Barberry with Chemicals.** By Noel F. Thompson, Assistant Pathologist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 4, figs. 3. March, 1923. (Department Circular 268.) Price, 5 cents.

**Earberry Eradication Prevents Black Rust in Western Europe.** By E. C. Stakman, Pathologist, Bureau of Plant Industry. Pp. 15, figs. 3. April, 1923. (Department Circular 269.) Price, 5 cents.

## MISCELLANEOUS.

**Crop and Live-Stock Estimates, 1910-1922.** A Summary of Area, Average Yield, Production, and Exports (or Imports) of Crops and Live Stock for the United States. Compiled by the Bureau of Agricultural Economics. Pp. 30. April, 1923. (Miscellaneous Circular No. 6.)

Figures for exports and imports are from the United States Bureau of Foreign and Domestic Commerce.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry, during the period from April 1 to May 31, 1920.** Pp. 99, pls. 4. March, 1923. (Inventory No. 63; Nos. 49797 to 50647.) Price, 20 cents.

## REPORTS.

**Report of the Alaska Agricultural Experiment Stations, 1921.** Pp. 58, pls. 12. March, 1923. Price, 10 cents.

**Report of the Guam Agricultural Experiment Station, 1921.** Pp. 43, pls. 6. Price, 10 cents.

## SERIALS.

**Journal of Agricultural Research.** Vol. 22, No. 10. December 3, 1921. Contents and Index to Volume 22. Pp. III-V, 517-526. Price, 5 cents.

**Journal of Agricultural Research.** Vol. 23, No. 5. February 3, 1923. Contents: Use of Alternating Temperatures in the Germination of Seeds. (G-274.) By George T. Harrington.—Water Content of Barley Kernels during Growth and Maturation. (G-275.) By H. V. Harlan and Merritt N. Pope.—Bacterial Leafspot of Geranium in the Eastern United States. (G-276.) Hydrogen-ion Concentration and Varietal Resistance of Wheat to Stemrust and Other Diseases. (G-277.) By Annie May Hurd.—Cotton-Wilt, a Seed-Borne Disease. (Ark.-2.) By John A. Elliott. Pp. 295-394, figs. 35, pls. 5. Price, 10 cents.



**Journal of Agricultural Research.** Vol. 23, No. 6. February 10, 1923. Contents: Iron and Manganese Content of Certain Species of Seeds. (Ky.-11.) By J. S. McHargue.—Studies upon the Life Cycles of the Bacteria—Part II: Life History of *Azotobacter*. (G-278.) By F. Lohnis and N. R. Smith.—Influence of Fertilizers Containing Borax on the Growth and Fruiting of Cotton. (G-279.) By J. J. Skinner and F. E. Allison.—Genetics of Bunt Resistance in Wheat. (Wash.-1.) By E. F. Gaines.—A Bacterial Leafspot of Tobacco. (G-280.) By James Johnson. Pp. 395-494, figs. 2, pls. 20. Price, 10 cents.

**Journal of Agricultural Research.** Vol. 23, No. 7. February 17, 1923. Contents: Parasitic Fungi Internal of Seed Corn. (Del.-4.) By Thomas F. Manns and J. F. Adams.—Cotton Rootrot in Arizona. (G-281.) By C. J. King.—Correlations Between Various Characters of Wheat and Flour as Determined from Published Data from Chemical, Milling, and Baking Tests of a Number of American Wheats. (Me.-16.) By Jacob Zinn.—*Aplastomorpha vandinei* Tucker, an Important Parasite of *Sitophilus oryza* L. (K-104.) By Richard T. Cotton.—Inheritance in Swine. (Kans.-28.) By Edward N. Wentworth and Jay L. Lush. Pp. 495-582, fig. 1, pls. 16. Price, 10 cents.

**Journal of Agricultural Research.** Vol. 23, No. 8. February 24, 1923. Contents: Early Vigor of Maize Plants and Yield of Grain as Influenced by the Corn Root, Stalk, and Ear Rot Diseases. (G-282.) By James R. Holbert, W. L. Burlison, H. Howard Biggar, Benjamin Koehler, George H. Dungan, and Merle T. Jenkins.—Effect of Burning of Vegetation in Kansas Pastures. (Kans.-29.) By R. L. Hensel.—Control of Lettuce Drop by the Use of Formaldehyde. (Mass.-7.) By Webster S. Krout.—Distribution of Pentosans in the Corn Plant at Various Stages of Growth. (Wis.-19.) By John H. Ver Hulst, W. H. Peterson, and E. B. Fred.—Stimulating the Growth of *Azotobacter* by Aeration. (Kans.-30.) By O. W. Hunter. Pp. 583-677, figs. 31, pls. 10. Price, 10 cents.

**Journal of Agricultural Research.** Vol. 23, No. 9. March 3, 1923: Contents: Gray Mold of Castor Bean. (G-283.) By G. H. Godfrey.—Influence of the Specific Gravity of Hens' Eggs on Fertility, Hatching Power, and Growth of Chicks. (Nebr.-5.) By F. E. Mussehl and D. L. Halbersleben.—Time Required for Food to Pass Through the Intestinal Tract of Fowls. (N. C.-15.) By B. F. Kaupp and J. E. Ivey.—Effectiveness of Mulches in Preserving Soil Moisture. (Utah-15.) By F. S. Harris and H. H. Yao.—Origin of the Central and Ostiolar Cavities in Pycnidia of Certain Fungous Parasites of Fruits. (G-284.) By B. O. Dodge.—Further Studies on the Pathogenicity of *Corticium vagum* on the Potato as Affected by Soil Temperature. (Utah-16.) By B. L. Richards. Pp. 679-770, figs. 13, pls. 20. Price, 10 cents.

**Journal of Agricultural Research.** Vol. 23, No. 10. March 10, 1923. Contents: Investigations of the Rosette Disease of Wheat and Its Control. (G-285.) By Harold H. McKinney.—Accumulation of Aluminum and Iron Compounds in Corn Plants and Its Probable Relation to Rootrots. (G-286.) By G. N. Hoffer and R. H. Carr.—Production of a Growth-Promoting Substance by *Azotobacter*. (Kans.-31.) By O. W. Hunter.—*Sclerotinia carunculoides*, the Cause of a Serious Disease of the Mulberry. (G-287.) By Eugene A. Siegler and Anna E. Jenkins. Pp. 771-836, figs. 5, pls. 31. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the *Journal of Agricultural Research* were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the *Journal* was suspended Dec. 1, 1921, and no parts were issued for 1922. The *Journal* is now being published weekly, beginning Jan. 6, 1923, with volume 23, No. 1. The *Journal* is distributed *free only* to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as made suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Vol. 48, No. 3. Abstract Number. March 28, 1923. Pp. 201-300. Price, 10 cents.

NOTE.—The *Record* is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.



**The Official Record.** Vol. 2, Nos. 14 to 17, April 4, 11, 18, and 25, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. Beginning April 1, a subscription list for it will be established by the Superintendent of Documents, Government Printing Office, Washington, D. C., the price being 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.

**Weather, Crops, and Markets.** Vol. 3, Nos. 13 to 16, April 7, 14, 21, and 28, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as *The Market Reporter*, *The Monthly Crop Reporter*, and the *National Weather and Crop Bulletin*, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.

**SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.**

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Agricultural Economics.** No. 73. *Official Grain Standards of the United States for Rye.* March 29, 1923. Pp. 1-5. April, 1923. Price, 5 cents.

**Bureau of Animal Industry.** No. 191. March, 1923. Pp. 27-36. April 24, 1923. Price, 5 cents.

**Bureau of Chemistry.** Supplement 154. *Notices of Judgments 1151-11200.* Pp. 85-111. April 20, 1923. Price, 5 cents.

**PUBLICATIONS OF THE WEATHER BUREAU.**

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 51, No. 1. January, 1923. Pp. 1-54, figs. 11, charts 13. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents. Special articles: History of radio in relation to the work of the Weather Bureau. By E. B. Calvert.—Meteorological stations in high altitudes. By Sir F. Stupart.—Frequency distributions of daily and hourly amounts of rainfall at Galveston, Texas. By I. R. Tannehill.—Lowering of Kansas River channel at Topeka, Kansas. By S. D. Flora.—Snowfall and the run-off of the upper Rio Grande. By C. E. Linney.—Frankenfield on the spring floods of 1922. By A. J. Henry.—The Amazon River Flood. By Doctor Hagmann.—Frost fighting in the Pecos Valley. By C. Hallenbeck.—A climatological calendar for Columbia, Mo. By G. Reeder.

NOTE.—The *Monthly Weather Review* is sent *free* only to organizations and scientific institutions exchanging like courtesies, to libraries of and workers in agricultural colleges and experiment stations, to universities and other institutions of learning in which systematic courses of instruction in meteorology are offered, and to officials of the Government.

Single numbers will be supplied free so long as the Bureau's supply lasts, and the *Review* can be obtained regularly from the Superintendent of Documents at the nominal price of \$1.50 per annum. Single copies may be had from the same source at 15 cents the copy.

EDWIN C. POWELL,  
*Acting Chief, Division of Publications.*















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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.

[MAY, 1923.]

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☞ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

☞ NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**The Muskrat as a Fur Bearer, with Notes on Its Use as Food.** By David E. Lantz, late Assistant Biologist, Division of Economic Investigations, Bureau of Biological Survey. Pp. 20, figs. 4. Revised April, 1923. (Farmers' Bulletin 869.)

This bulletin is intended primarily to show the economic importance of the muskrat and to encourage further legislation for its protection.

**Farm Slaughtering and Use of Lamb and Mutton.** By C. G. Potts, Animal Husbandman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 32, figs. 30. Revised April, 1923. (Farmers' Bulletin 1172.)

This bulletin contains a discussion of the methods employed in slaughtering the animal, cutting up the carcass, and curing the flesh; also recipes for cooking the meat.

**How to Get Rid of Rats.** By James Silver, Biological Assistant, Division of Economic Investigations, Bureau of Biological Survey. Pp. 14, figs. 8. April, 1923. (Farmers' Bulletin 1302.)

Suitable for general distribution.

**The Striped Cucumber Beetle and How to Control It.** By F. H. Chittenden, Entomologist in Charge, Truck-Crop Insect Investigations, Bureau of Entomology. Pp. 16, figs. 16. April, 1923. (Farmers' Bulletin 1322.)

This bulletin is a revision of and supersedes Farmers' Bulletin 1038, "The Striped Cucumber Beetle and Its Control."

### DEPARTMENT BULLETINS—TECHNICAL.

☞ The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**Adulteration of Insect Powder with Powdered Daisy Flowers (*Chrysanthemum Leucanthemum* L.).** By R. C. Roark, Assistant Chemist, Insecticide and



Fungicide Board, and G. L. Keenan, Microanalyst, Microchemical Laboratory, Bureau of Chemistry. Pp. 10, fig. 1, pls. 2. Revised May 15, 1923. (Department Bulletin 795.) Price, 5 cents.

**Natural Reproduction of Western Yellow Pine in the Southwest.** By G. A. Pearson, Silviculturist, Fort Valley Forest Experiment Station, Forest Service. Pp. 144, figs. 16, pls. 22. April 27, 1923. (Department Bulletin 1105.) Price, 30 cents.

The purpose of this study is to determine what measures are necessary to secure natural reproduction of western yellow pine in the region mentioned.

**Decays and Discolorations in Airplane Woods.** By J. S. Boyce, Pathologist, Office of Investigations in Forest Pathology, Bureau of Plant Industry. Pp. 52, figs. 9, pls. 7. (Professional Paper.) February 20, 1923. (Department Bulletin 1128.) Price, 20 cents.

The purpose of this bulletin is to enumerate and describe the more important decays and discolorations to which woods used in aircraft construction are subject and the conditions under which they occur.

**Self-Fertilization and Cross-Fertilization in Pima Cotton.** By Thomas H. Kearney, Physiologist in Charge of Alkali and Drought Resistant Plant Investigations, Bureau of Plant Industry. Pp. 68, figs. 4, pls. 7. (Professional Paper.) April 26, 1923. (Department Bulletin 1134.) Price, 10 cents.

**Spinning Tests of Cotton Compressed to Different Densities.** By William R. Meadows, Cotton Technologist, and William G. Blair, Specialist in Cotton Testing, Bureau of Agricultural Economics. Pp. 19, figs. 4, pls. 5. (Professional Paper.) May 19, 1923. (Department Bulletin 1135.) Price, 10 cents.

Discusses the possibility of injury to the spinning value of cotton when compressed to different densities.

**Kiln Drying Handbook.** By Rolf Thelen, In Charge, Section of Timber Physics, Forest Products Laboratory, Forest Service. Pp. 64, figs. 12, pls. 11. May 12, 1923. (Department Bulletin 1136.) Price, 25 cents.

The principal purpose of this bulletin is to present to the dry-kiln operator, in condensed and convenient form, the fundamental facts about drying of wood which he must know in order to get the most satisfactory results with his kiln.

**Migration Records from Wild Ducks and Other Birds; Banded in the Salt Lake Valley, Utah.** By Alexander Wetmore, Assistant Biologist, Division of Biological Investigations, Bureau of Biological Survey. Pp. 16, fig. 1, pls. 2. May 10, 1923. (Department Bulletin 1145.) Price, 5 cents.

**Feeding Habits of the Japanese Beetle Which Influence Its Control.** By Loren B. Smith, Entomologist, Deciduous Fruit Insect Investigations, Bureau of Entomology. Pp. 12, figs. 3. April 30, 1923. (Department Bulletin 1154.) Price, 5 cents.

Besides describing the feeding habits of the Japanese beetle this bulletin discusses its movements, control measures, and process of infestation.

**Studies on Contact Insecticides.** By Charles H. Richardson, Insect Physiologist, Fruit Insect Investigations, Bureau of Entomology, and C. R. Smith, Chemist, Bureau of Chemistry. Pp. 16. May 29, 1923. (Department Bulletin 1160.) Price, 5 cents.

This investigation involves a study of the toxicity of the more readily available organic compounds when used as contact insecticides.

#### CIRCULARS.

**Status and Results of Boys' and Girls' Club Work.** Northern and Western States, 1921. By George E. Farrell, In Charge of Boys' and Girls' Club Work, Office of Extension Work in the North and West, States Relations Service, and Gertrude L. Warren, Assistant. Pp. 29, figs. 12. April, 1923. (Department Circular 255.) Price, 5 cents.

**Frost Resistance in Flax.** By Robert L. Davis, Assistant Plant Breeder, Office of Fiber-Plant Investigations, Bureau of Plant Industry. Pp. 8, figs. 5. May, 1923. (Department Circular 264.) Price, 5 cents.

Results of investigations to determine the extent of frost resistance in different varieties of flax are contained in this circular.

**Dusting for the Cotton-Boll Weevil.** By B. R. Coad and T. P. Cassidy, Bureau of Entomology. Pp. 3. May, 1923. (Department Circular 274.) Price, 5 cents.



## MISCELLANEOUS.

**Yearbook of the U. S. Department of Agriculture, 1922.** Pp. 1,137, il. Price, \$1.25 a copy.

The Yearbook for 1922 continues the plan adopted for the Yearbook for 1921 of presenting in a somewhat detailed manner the economic situation regarding five of our leading agricultural products—hogs, dairy, tobacco, small grains other than wheat, and forestry. The object is to give the history of each subject, the present situation, and the future outlook.

The number of Yearbooks allotted to the department will not permit us to furnish a copy to anyone except our own investigators, field workers, and official cooperators. Applicants other than persons in these groups are advised that each Member of Congress receives an allotment to be distributed as he may direct, and that the Superintendent of Documents, Government Printing Office, Washington, D. C., has copies for sale at \$1.25 each.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from June 1 to September 30, 1920.** Pp. 99, pls. 8. Issued by the Bureau of Plant Industry. May 14, 1923. (Inventory No. 64; Nos. 50648 to 51357.) Price, 15 cents.

**In the Land of the Ancient Cliff Dweller; Bandelier National Monument, Santa Fe National Forest, New Mexico.** Prepared by the Forest Service. Pp. 18, il. March, 1923. (Miscellaneous Circular No. 5.) Price, 5 cents.

For sale only.

## SERIALS.

**Journal of Agricultural Research.** Vol. 23, No. 11, March 17, 1923. Contents: Influence of Soil Temperature and Moisture on the Development of the Seedling-Blight of Wheat and Corn Caused by *Gibberella saubinetii*. (G-288.) By James G. Diskson.—Further Studies in Photoperiodism, the Response of the Plant to Relative Length of Day and Night. (G-289.) By W. W. Garner and H. A. Allard.—*Agamermis decaudata* Cobb, Steiner and Christie; a Nema Parasite of Grasshoppers and Other Insects. (G-290.) By N. A. Cobb, G. Steiner, and J. R. Christie. Pp. 837-926, figs. 15, pls. 25. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the Journal was suspended Dec. 1, 1921, and no parts were issued for 1922. The Journal is now being published weekly, beginning Jan. 6, 1923, with volume 23, No. 1. The Journal is distributed *free only* to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Vol. 48, No. 4. March, 1923. Pp. 301-400. Price, 10 cents.

**Same.** Vol. 48, No. 5. April, 1923. Pp. 401-500. Price, 10 cents.

**Same.** Vol. 48, No. 6. Abstract Number. May 12, 1923. Pp. 501-600. Price, 10 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 18 to 22, May 2, 9, 16, 23, and 30, 1923.

**Index to The Official Record.** Volume 1, January 4, 1922, to December 27, 1922. Pp. 1-31. Price, 5 cents.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. Beginning April 1, a subscription list for it will be established by the Superintendent of Documents, Government Printing Office, Washington, D. C., the price being 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.

**Weather, Crops, and Markets,** Vol. 3, Nos. 18 to 21, May 5, 12, 19, and 26, 1923.

**Index to Weather, Crops, and Markets.** Volume 2, July-December, 1922. Price, 5 cents.

This publication is issued weekly and combines three important regular periodicals heretofore issued as The Market Reporter, The Monthly Crop Reporter, and the National Weather and Crop Bulletin, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

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## SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of Guilford County, N. C.** By R. C. Journey and S. O. Perkins, of the U. S. Department of Agriculture, and W. A. Davis and W. D. Lee, of the North Carolina Department of Agriculture. Pp. 32, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Mills County, Iowa.** By Grove B. Jones, of the U. S. Department of Agriculture, and N. J. Russell, of the Iowa Agricultural Experiment Station. Pp. 32, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Multnomah County, Oreg.** By C. V. Ruzek, of the Oregon Agricultural Experiment Station, and E. J. Carpenter, of the U. S. Department of Agriculture. Pp. 98, fig. 1, pls. 2, map. (From *F. O. Soils, 1919.*) Price, 25 cents.

## SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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**Service and Regulatory Announcements.** Bureau of Agricultural Economics. No. 73. Official Grain Standards of the United States for Rye. March 29, 1923. Pp. 1-5. April, 1923. Price, 5 cents.

**Service and Regulatory Announcements.** Bureau of Animal Industry. No. 192. April, 1923. Pp. 37-44. May 22, 1923. Price, 5 cents.

**Same.** Bureau of Biological Survey. No. 54. Regulations for the Importation of Eggs of Game Birds for Propagation. Pp. 1. May, 1923. Price, 5 cents.

**Same.** Bureau of Chemistry. Supplement 155. Notices of Judgments 11201-11250. Pp. 113-130. May 8, 1923. Price, 5 cents.

**Same.** Bureau of Chemistry. Supplement 156. Notices of Judgments 11251-11300. Pp. 131-149. May, 1923. Price, 5 cents.

**Same.** Insecticide and Fungicide Board. No. 44. Notices of Judgments 826-850. Pp. 1033-1056. May, 1923. Price, 5 cents.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 51, No. 2. February, 1923. [May, 1923.] Pp. 55-109, figs. 51, pls. 2, charts 13. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: A statistical study of surface and upper-air conditions in cyclones and anticyclones passing over Davenport, Iowa. By A. D. Udden.—Brazilian Meteorological Service (1921-1923.) By J. de S. Ferraz.—Pretechnical meteorological studies. By H. E. Simpson, with discussion by C. F. Marvin.—Values of the solar constant, 1920-1922. By C. G. Abbot.—Dense fog in the tri-cities on November 3, 1922. By E. E. Unger.—Windstorm at Independence, Calif., Feb. 12, 1923. By C. D. Asher.—Predicting minimum temperatures. By W. J. Bennett.

**Same.** Index to volume 50. 1922. Pp. i-xvi. Price, 5 cents.

NOTE.—The Monthly Weather Review is sent *free* only to organizations and scientific institutions exchanging like courtesies, to libraries of and workers in agricultural colleges and experiment stations, to universities and other institutions of learning in which systematic courses of instruction in meteorology are offered, and to officials of the Government.

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EDWIN C. POWELL,  
Acting Chief, Division of Publications.

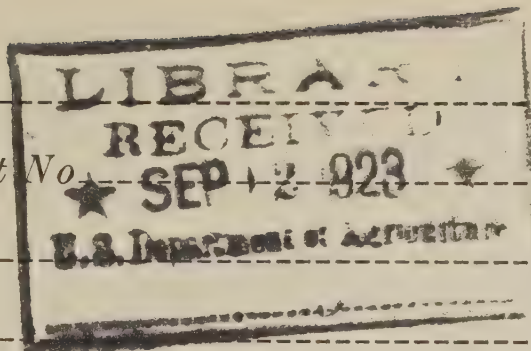


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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.

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### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

✉ NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Marketing the Early-Potato Crop.** By George B. Fiske, Investigator in Marketing Fruits and Vegetables, and Paul Froehlich, Assistant in Market Surveys, Bureau of Agricultural Economics. Pp. 33, figs. 18. May, 1923. (Farmers' Bulletin 1316.)

This bulletin tells how the crop is sold in the leading early-potato sections; the location, shipping points, and relative importance of the heavy early shipping districts are shown; kind and source of information which the grower should use are described; and the grower told how to make the most of them in marketing his crop.

**Greenhouse Construction and Heating.** By James H. Beattie, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 38, figs. 20. May, 1923. (Farmers' Bulletin 1318.)

This bulletin discusses the construction and heating of greenhouses, giving such information as will be useful to those who contemplate engaging in the business.

**Cotton-Dusting Machinery.** By Elmer Johnson, Agricultural Engineer, Bureau of Public Roads; S. T. Howard, Mechanical Engineer; and B. R. Coad, Entomologist, Southern Field-Crop Insect Investigations, Bureau of Entomology. Pp. 20, figs. 4. May, 1923. (Farmers' Bulletin 1319.)

This bulletin tells the prospective buyer how to select a type of dusting machine suited to the conditions and needs of his own farm, and one that should prove efficient and durable if given proper care. It supersedes Farmers' Bulletin 1098, "Dusting Machinery for Cotton-Boll Weevil Control."

**The Production of Cucumbers in Greenhouses.** By James H. Beattie, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 30, figs. 18. May, 1923. (Farmers' Bulletin 1320.)

**Canaries: Their Care and Management.** By Alexander Wetmore, Assistant Biologist, Division of Biological Investigations, Bureau of Biological Survey. Pp. 22, figs. 6. May, 1923. (Farmers' Bulletin 1327.)

This bulletin is a revision of and supersedes Farmers' Bulletin 770, "Canaries: Their Care and Management."

**Seed Potatoes and How to Produce Them.** By William Stuart, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 18, figs. 17. May, 1923. (Farmers' Bulletin 1332.)

This bulletin is a revision of and supersedes Farmers' Bulletin 533, "Good Seed Potatoes and How to Produce Them."



## DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**Milk-Plant Operation.** By Clarence E. Clement, Market Milk Specialist, Dairy Division, Bureau of Animal Industry. Pp. 46, figs. 26. June 5, 1923. (Department Bulletin 973.) Price, 10 cents.

**The Effect of Borax on the Growth and Yield of Crops.** By J. J. Skinner and B. E. Brown, Biochemists, and F. R. Reid, Assistant Biochemist, Office of Soil-Fertility Investigations, Bureau of Plant Industry. Pp. 31, pls. 11. April 23, 1923. (Department Bulletin 1126.) Price, 15 cents.

**Evaporation of Fruits.** By Joseph S. Caldwell, Plant Physiologist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 64, figs. 18. May, 1923. (Department Bulletin 1141.) Price, 10 cents.

Of interest to fruit growers who have such quantities of surplus fruit as to require the employment of large-scale factory methods for its utilization. The bulletin is intended to serve as a rather complete nontechnical handbook of information in regard to methods of evaporating fruits which are applicable to farm conditions.

**Chemical, Physical, and Insecticidal Properties of Arsenicals.** By F. C. Cook, Physiological Chemist, Insecticide and Fungicide Laboratory, Bureau of Chemistry, and N. E. McIndoo, Insect Physiologist, Fruit Insect Investigation, Bureau of Entomology. Pp. 57. June 9, 1923. (Department Bulletin 1147.) Price, 10 cents.

This bulletin covers a detailed study of the chemical, physical, and insecticidal properties of arsenicals undertaken to gain a better understanding of them, to improve them if possible, and to produce new arsenicals for insecticidal purposes.

**Absorption and Retention of Hydrocyanic Acid by Fumigated Food Products.** By E. L. Griffin, Assistant Chemist, and I. E. Neifert, Junior Chemist, Insecticide and Fungicide Laboratory, Miscellaneous Division, Bureau of Chemistry; N. Perrine, Assistant in Plant Fumigation, Federal Horticultural Board; and A. B. Duckett, Scientific Assistant, Stored-Product Insect Investigations, Bureau of Entomology. Pp. 16, pls. 2. May 9, 1923. (Department Bulletin 1149.) Price, 5 cents.

Contains the results of experiments conducted to determine the quantity of hydrocyanic acid absorbed and retained by fumigated foodstuffs.

**Silver-Fox Farming.** By Frank G. Ashbrook, Assistant Biologist, Division of Economic Investigations, Bureau of Biological Survey. Pp. 60, figs. 60, pls. 4. June 20, 1923. (Department Bulletin 1151.) Price, 15 cents.

Supersedes Farmers' Bulletin 795, "The Domesticated Silver Fox."

**Soy and Related Fermentations.** By Margaret B. Church, Microanalyst, Microbiological Laboratory, Bureau of Chemistry. Pp. 27, figs. 5. May 12, 1923. (Department Bulletin 1152.) Price, 15 cents.

**Boll-Weevil Cotton in Texas.** By O. F. Cook, Bionomist in Charge, Office of Crop Acclimatization and Adaptation Investigations, Bureau of Plant Industry. Pp. 20, pls. 4. May 12, 1923. (Department Bulletin 1153.) Price, 5 cents.

This bulletin discusses cultivation practices that are necessary when growing cotton in Texas under boll-weevil conditions.

**Rice Experiments at the Biggs Rice Field Station in California.** By Jenkin W. Jones, Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 60, figs. 15. June, 1923. (Department Bulletin 1155.) Price, 10 cents.

**Investigations of Potato Wart.** By Freeman Weiss, Pathologist, Office of Cotton, Truck, and Forage Crop Disease Investigations, Bureau of Plant Industry; C. R. Orton, Pathologist, Pennsylvania Agricultural Experiment Station; and R. E. Hartman, Pathologist for Potatoes, Pennsylvania Department of Agriculture. Pp. 22, figs. 3, pls. 4. May, 1923. (Department Bulletin 1156.) Price, 10 cents.

**Influence of Spacing on Productivity in Single-Ear and Prolific Types of Corn.** By E. B. Brown, Agronomist, and H. S. Garrison, Assistant Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 11, figs. 6. May 21, 1923. (Department Bulletin 1157.) Price, 5 cents.

Results of experiments on the influence of space between hills of corn on the yield per plant and per acre have been published in this bulletin, which is of particular interest to the southern portion of the United States where both the single-ear and prolific types of corn are more or less commonly grown.

**Effect of Composition on the Palatability of Ice Cream.** By Owen E. Williams and George R. Campbell, Dairy Manufacturing Specialists, Dairy Division, Bureau of Animal Industry. Pp. 8, figs. 3. June 7, 1923. (Department Bulletin 1161.) Price, 5 cents.

## CIRCULARS.

**Preliminary Report on Control of San Jose Scale with Lubricating Oil Emulsion.** By A. J. Ackerman, Entomologist, Fruit Insect Investigations, Bureau of Entomology. Pp. 18, figs. 6. June, 1923. (Department Circular 263.) Price, 5 cents.

**Grounding Cotton Gins to Prevent Fires.** By H. E. Roethe, Associate Development Engineer, Bureau of Chemistry. Pp. 4, fig. 1. May, 1923. (Department Circular 271.) Price, 5 cents.

A grounding system that will greatly reduce the number of fires occurring in cotton gins in the South is described in detail in this circular.



**Woolly-Pod Milkweed: A Dangerous Stock-Poisoning Plant.** By C. D. Marsh, Physiologist in Charge of Investigations of Stock Poisoning by Plants, and A. B. Clawson, Physiologist, Pathological Division, Bureau of Animal Industry. Pp. 4, fig. 1. June, 1923. (Department Circular 272.) Price, 5 cents.

**List of Workers in Subjects Pertaining to Agriculture. Part 2. State Agricultural Colleges and Experiment Stations. 1922-1923.** Prepared by the States Relations Service. Pp. 108. May, 1923. (Miscellaneous Circular No. 4.) Price, 15 cents.

#### MISCELLANEOUS.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period From October 1 to December 31, 1920.** Pp. 96, pls. 6. Issued by the Bureau of Plant Industry. May, 1923. (Inventory No. 66; Nos. 52306 to 52854.) Price, 15 cents.

**Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period From January 1 to March 31, 1921.** Pp. 91, pls. 8. Issued by the Bureau of Plant Industry. May, 1923. (Inventory No. 66; Nos. 52306 to 52854.) Price, 15 cents.

**Application of the Principles of Jelly Making to Hawaiian Fruits.** By J. C. Ripperton, Chemist. Pp. 24, pl. 1. June 21, 1923. (Hawaii Agricultural Experiment Station Bulletin 47.) Price, 5 cents.

**Swine Raising in Hawaii.** By F. G. Krauss, Superintendent of Extension Work. Pp. 43, figs. 26. May 31, 1923. (Hawaii Agricultural Experiment Station Bulletin 48.) Price, 5 cents.

**Insect Pests of Cotton in St. Croix and Means of Combating Them.** By Charles E. Wilson, Entomologist. Pp. 20, figs. 21. May, 1923. (Virgin Islands Agricultural Experiment Station Bulletin No. 3.) Price, 5 cents.

#### SERIALS.

**Journal of Agricultural Research.** Vol. 23, No. 12. March 24, 1923. Contents: Summer Irrigation of Pima Cotton. (G-291.) By R. D. Martin and H. F. Loomis.—Permanence of Variety in the Potato. (Minn.-44.) By Fred A. Krantz.—Anatomical Studies on Potato-Wart. (G-292.) By Ernst F. Artschwager.—Influence of Temperature and Evaporation upon the Development of *Aphis pomi* De Geer. (Oreg.-8.) By Frank H. Lathrop.—Downy Mildew on Lettuce in California. (G-293.) By D. G. Milbrath.—Determination of Starch Content in the Presence of Interfering Polysaccharids. (E-20.) By George P. Walton and Mayme R. Coe.—Biological Notes on the Hen Flea, *Echidnophaga gallinacea*. (K-105.) By D. C. Parman. Pp. 927-1009, figs. 12, pls. 9. Price, 10 cents.

**Same.** Vol. 24, No. 1. April 7, 1923. Contents: Temperature Relations of Eleven Species of *Rhizopus*. (G-294.) By J. L. Weimer and L. L. Harter.—Nutrition of Plants Considered as an Electrical Phenomenon. (G-295.) By James F. Breazeale.—Influence of Soil Temperature and Soil Moisture upon the *Fusarium* Disease in Cabbage Seedlings. (Wis.-20.) By William B. Tisdale.—Action of Soap upon Lead Arsenates. (Mont.-9.) By R. M. Pickney. Pp. 1-95, figs 38, pls. 2. Price, 10 cents.

**Same.** Vol. 24, No. 2. April 14, 1923. Contents: Physiological Requirements of Rocky Mountain Trees. (F-8.) By Carlos G. Bates.—A Study of the Internal Browning of the Yellow Newton Apple. (Calif.-32.) By A. J. Winkler.—On the Use of Calcium Carbonate in Nitrogen Fixation Experiments. (Kans.-32.) By P. L. Gainey. Pp. 97-190, figs. 7, pls. 8. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the *Journal of Agricultural Research* were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the *Journal* was suspended December 1, 1921, and no parts were issued for 1922. The *Journal* is now being published weekly, beginning January 6, 1923, with volume 23, No. 1. The *Journal* is distributed free only to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Volume 47. Index number. July-December, 1922. Pp. 901-1001. May 19, 1923. Price, 10 cents.

**Same.** Vol. 48, No. 7. May, 1923. Pp. 601-700. Price, 10 cents.

NOTE.—The *Record* is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 23 to 26, June 6, 13, 20, and 27, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. It can be subscribed to through the Office of the Superintendent of Documents, Government Printing Office, Washington, D. C., for 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.

**Weather, Crops, and Markets.** Vol. 3, Nos. 22 to 26, June 2, 9, 16, 23, and 30, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as *The Market Reporter*, *The Monthly Crop Reporter*, and the *National Weather and Crop Bulletin*, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.



## SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of Adams County, Indiana.** By Grove B. Jones and Mark Baldwin, of the U. S. Department of Agriculture; S. C. Jones, Thomas Jabine, and T. M. Bushnell, of the Purdue University Agricultural Experiment Station; and J. Bayard Brill, of the Indiana Department of Geology. Pp. 20, fig. 1, map. (From *F. O. Soils, 1921.*) Price, 15 cents.

**Soil Survey of Boone County, Iowa.** By A. M. O'Neal, jr., of the U. S. Department of Agriculture, and A. M. Deyoe, of the Iowa Agricultural Experiment Station. Pp. 32, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Choctaw County, Mississippi.** By A. C. Anderson, of the U. S. Department of Agriculture, and E. Malcolm Jones and Thomas Jabine, of the Mississippi Geological Survey. Pp. 38, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Houston County, Alabama.** By R. T. Avon Burke and A. T. Sweet. Pp. 30, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Leavenworth, Kansas.** By E. H. Smies, of the U. S. Department of Agriculture, and G. Y. Blair, of the Kansas Agricultural Experiment Station. Pp. 65, fig. 1, map. (From *F. O. Soils, 1919.*) Price, 15 cents.

**Soil Survey of Madison County, Nebraska.** By F. A. Hayes and L. S. Paine, of the U. S. Department of Agriculture, and D. L. Gross and O. M. Krueger, of the Nebraska Soil Survey. Pp. 48, fig. 1, map. (From *F. O. Soils, 1920.*) Price, 15 cents.

**Soil Survey of Red River County, Texas.** By William T. Carter, jr., J. O. Veatch, M. W. Beck, H. V. Geib, H. C. Mortlock, and C. E. Deardorff, of the U. S. Department of Agriculture, and H. W. Hawker, J. F. Stroud, and W. B. Francis, of the Texas Agricultural Experiment Station. Pp. 53, fig. 1, map. (From *F. O. Soils, 1919.*) Price, 25 cents.

**Soil Survey of the Shasta Valley Area, California.** By E. B. Watson, of the U. S. Department of Agriculture, and M. E. Wank and Alfred Smith, of the University of California. Pp. 54, fig. 1, map. (From *F. O. Soils, 1919.*) Price, 25 cents.

## SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Animal Industry.** No. 193. May, 1923. Pp. 45-52. June, 1923. Price, 5 cents.

**Bureau of Chemistry.** Supplement 157. Notices of Judgments 11301-11350. Pp. 151-182. June, 1923. Price, 5 cents.

**Bureau of Plant Industry.** No. 6. The Adulteration and Misbranding of the Seeds of Redtop. April, 1923. Pp. 1-3. June, 1923. Price, 5 cents.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 51, No. 3. March, 1923. Pp. 111-173, figs. 9, pls. 2, charts 11. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: The wind factor in flight: An analysis of one year's record of the air mail. By W. R. Gregg and J. P. Van Zandt.—Wind directions and the orientation of schoolhouses. By R. Nunn.—Radio reports give timely notice of rains in California. By G. H. Wilson.—Some temperature and humidity relations of the air. By W. J. Humphreys.—Atmospheric pressure and the codling moth. By C. C. Garrett.—Three Wisconsin snowstorms. By W. P. Stewart.—Snowstorms of March 11-18, 1923, at Dubuque, Iowa, and vicinity. By H. M. Wills.—The storms of March 11-12, 1923, in Illinois. By C. J. Root.—Tornado in Tennessee on March 11, 1923. By R. M. Williamson.—Climatological data for Central America. By W. W. Reed.

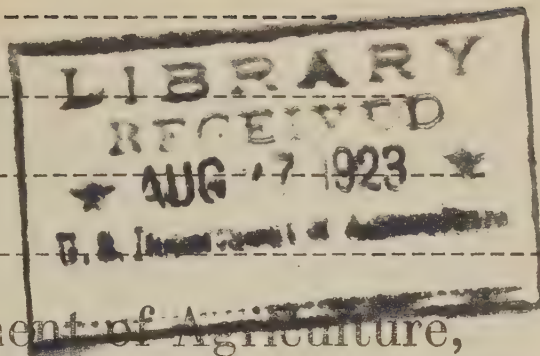
NOTE.—The Monthly Weather Review is sent free only to organizations and scientific institutions exchanging like courtesies, to libraries of and workers in agricultural colleges and experiment stations, to universities and other institutions of learning in which systematic courses of instruction in meteorology are offered, and to officials of the Government.

Single numbers will be supplied free so long as the bureau's supply lasts, and the Review can be obtained regularly from the Superintendent of Documents at the nominal price of \$1.50 per annum. Single copies may be had from the same source at 15 cents the copy.

EDWIN C. POWELL,  
Acting Assistant in Charge of Publications.



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## United States Department of Agriculture,

### MONTHLY LIST OF PUBLICATIONS.

[JULY, 1923.]

#### READ CAREFULLY BEFORE ORDERING.

Send no remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the assistant in charge of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Distribution of Types of Farming in the United States.** By W. J. Spillman, Consulting Specialist, Bureau of Agricultural Economics. Pp. 30, figs. 5. May, 1923. (Farmers' Bulletin 1289.)

Attempts to analyze in a general way what farm enterprises are adapted to a region by studying the physical, biological, and economic conditions prevailing in the region.

**The Wheat Strawworm and Its Control.** By W. J. Phillips, Entomologist, and F. W. Poos, Assistant Entomologist, Cereal and Forage Insect Investigations, Bureau of Entomology. Pp. 10, figs. 12. May, 1923. (Farmers' Bulletin 1323.)

Describes economic importance of the wheat strawworm, its life history, and the damage it does, and suggests methods of control.

**Lamb and Mutton and Their Use in the Diet.** Prepared in the office of home economics, States Relations Service. Pp. 14, fig. 1. June, 1923. (Farmers' Bulletin 1324.)

Supersedes Farmers' Bulletin 526, "Mutton and Its Value in the Diet."

**Rural Planning—The Social Aspects.** By Wayne C. Nason, junior economist, Bureau of Agricultural Economics. Pp. 30, figs. 25. May, 1923. (Farmers' Bulletin 1325.)

Deals with the improvement and beautifying of various rural institutions, such as recreation places, public grounds, and trade and civic centers. Its purpose is not to tell how things should be done, but to show what has actually been done.

**The Boll-Weevil Problem.** By W. D. Hunter, Entomologist in Charge, and B. R. Coad, Entomologist, Southern Field-Crop Insect Investigations, Bureau of Entomology. Pp. 30, figs. 5. June, 1923. (Farmers' Bulletin 1329.)

Supersedes Farmers' Bulletin 1262 of the same title.

**Back-Yard Poultry Keeping.** By Rob R. Slocum, formerly of the Animal Husbandry Division, Bureau of Animal Industry. Pp. 23, figs. 15. May, 1923. (Farmers' Bulletin 1331.)

This bulletin is a revision of and supersedes Farmers' Bulletin 889, "Back-yard Poultry Keeping."

**Tomatoes as a Truck Crop.** By W. R. Beattie, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 34, figs. 21. June, 1923. (Farmers' Bulletin 1338.)



## DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**Production of Sirup from Sweet Potatoes.** By H. C. Gore, chemist in charge, Fruit and Vegetable Utilization Laboratory, H. C. Reese, assistant development engineer, and J. O. Reed, assistant development engineer, office of development work, Bureau of Chemistry. Pp. 34, figs. 13, July 3, 1923. (Department Bulletin 1158.) Price, 10 cents.

Besides discussing experiments conducted in the making of sweet potato sirup, the commercial production of this product is also dealt with in this bulletin.

**Report on Bird Censuses in the United States, 1916 to 1920.** By May Thatcher Cooke, assistant in biological investigations, Bureau of Biological Survey. Pp. 36, July 20, 1923. (Department Bulletin 1165.) Price, 5 cents.

**Apple By-Products as Stock Foods.** By G. P. Walton, Assistant Chemist, and G. L. Bidwell, Chemist in Charge, Cattle Food Laboratory, Miscellaneous Division, Bureau of Chemistry. Pp. 40, fig. 1. July 26, 1923. (Department Bulletin 1166.) Price, 5 cents.

## CIRCULARS.

**Arbor Day.** Prepared by the Forest Service. Pp. 15, figs. 7. June, 1923. (Department Circular 265.) Price, 5 cents.

This publication supersedes Department Circular 8 of the same title.

**The Work of the Newlands Reclamation Project Experiment Farm in 1920 and 1921.** By F. B. Headley, Farm Superintendent, and E. W. Knight, Assistant Agriculturist, Office of Western Irrigation Agriculture, Bureau of Plant Industry. Pp. 26, figs. 9. March, 1923. (Department Circular 267.) Price, 5 cents.

**Flag Smut of Wheat.** By W. H. Tisdale, Pathologist in Charge of Cereal-Smut Investigations, Office of Cereal Investigations, Bureau of Plant Industry, G. H. Dungan, Associate in Crop Production, Illinois Agricultural Experiment Station, University of Illinois, and C. E. Leighty, Agronomist in Charge of Eastern Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 7, pls. 2. June, 1923. (Department Circular 273.) Price, 5 cents.

**Greasewood as a Poisonous Plant.** By C. Dwight, Physiologist in Charge, A. B. Clawson, Physiologist, and James F. Couch, Pharmacological Chemist, Investigations of Stock Poisoning by Plants, Pathological Division, Bureau of Animal Industry. Pp. 4, figs. 2. July, 1923. (Department Circular 279.) Price, 5 cents.

**A Forest Fire Prevention Handbook for the School Children of California.** Prepared by the Forest Service, United States Department of Agriculture, and the State forester in cooperation with the superintendent of public instruction of the State of California. Pp. 24, il. July 2, 1923. (Miscellaneous Circular 7.) Price, 10 cents.

**Demonstration Courses in Kiln Drying, Boxing and Crating, Gluing of Wood, Wood properties and Uses.** Prepared by the Forest Products Laboratory, Forest Service. Pp. 20, il. June, 1923. (Miscellaneous Circular No. 8.) Price, 5 cents.

## MISCELLANEOUS.

**A Biological Survey of the Pribilof Islands, Alaska. I. Birds and Mammals. II. Insects, Arachnids, and Chilopods.** Part I by Edward A. Preble, assistant biologist, Division of Biological Investigations, and W. L. McAtee, in charge food habits research, Bureau of Biological Survey. Part II by various entomologists, with an introduction by W. L. McAtee, Biological Survey. Pp. 255, pls. 15. June 20, 1923. (North American Fauna No. 46.) Price, 40 cents.

For sale only.

**The Acid Lime Fruit in Hawaii.** By W. T. Pope, Horticulturist. Pp. 20, pls. 6. July 9, 1923. (Hawaii Agricultural Experiment Station Bulletin 49.) Price, 10 cents.

**Truck-Crop Insect Pests in the Virgin Islands and Methods of Combating Them.** By Charles E. Wilson, Entomologist. Pp. 35, figs. 24. June 21, 1923. (Virgin Islands Agricultural Experiment Station Bulletin 4.) Price, 5 cents.



## SERIALS.

- Journal of Agricultural Research**, Vol. 24, No. 3, April 21, 1923. Contents: Gummosis of citrus. (Calif. 33.) By Howard S. Fawcett.—Occurrence and significance of phloem necrosis in the Irish potato. (G-296.) By Ernst F. Artschwager.—Cultivated and wild hosts of sugar-cane or grass mosaic. (G-297.) By E. W. Brandes and Peter J. Klaphaak.—Protein synthesis by azotobacter. (Kans.-33.) By O. W. Hunter. Pp. 191-274, pls. 17, figs. 3. Price, 10 cents.
- Same.** Vol. 24, No. 4, April 28, 1923. Contents: Studies of the temperature of individual insects, with special reference to the honey bee. (Minn.-45.) By Gregor B. Pirsch.—A study on the effect of changing the absolute reaction of soils upon their azotobacter content. (Kans.-34.) By P. L. Gainey.—Oxidation of sulphur by microorganisms in black alkali soils. (N. J.-9.) By Selman A. Waksman, Clara H. Wark, Jacob Joffe, and Robert L. Starkey.—Peach rosette, an infectious mosaic. (Ga.-3.) By J. A. McClintock.—Toxicity and antagonism of various alkali salts in the soil. (Utah-17.) By F. S. Harris, M. D. Thomas, and D. W. Pittman.—Identification of certain species of fusarium isolated from potato tubers in Montana. (Mont.-10.) By H. E. Morris and Grace B. Nutting. Pp. 275-364, pls. 14, figs. 14. Price, 10 cents.
- Same.** Vol. 24, No. 5, May 5, 1923. Contents: Determination of Fatty Acids in butter fat: II. (Mass.-8.) By E. B. Holland, Mary E. Carvey, H. B. Pierce, Anne C. Messer, J. G. Archibald, and C. O. Dunbar.—Striped sod webworm, *Crambus mutabilis* Clemens. (K-106.) By George G. Ainslie.—Silver-striped webworm, *Crambus praelectellus* Zincken. (K-107.) By George G. Ainslie.—Movement of soil moisture from small capillaries to the large capillaries of the soil upon freezing. (Mich.-13.) By George John Bouyoucos.—Nutritive value of the Georgia velvet bean (*Stizilobium deeringianum*). (Ark.-3.) By J. W. Read and Barnett Sure. Pp. 365-440, figs. 16, pls. 4. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the *Journal of Agricultural Research* were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18, the issue is semimonthly. The publication of the *Journal* was suspended Dec. 1, 1921, and no parts were issued for 1922. The *Journal* is now being published weekly, beginning Jan. 6, 1923, with volume 23, No. 1. The *Journal* is distributed *free only* to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Vol. 48, No. 8. June, 1923. Pp. 701-800. Price, 10 cents.

**Same.** Vol. 48, No. 9. Abstract Number. June 26, 1923. Pp. 801-900. Price, 10 cents.

NOTE.—The *Record* is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions, \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 27 to 30, July 4, 11, 18, and 25, 1923.

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**Weather, Crops, and Markets.** Vol. 4, Nos. 1 to 4, July 7, 14, 21, and 28.

This publication is issued weekly and combines three important regular periodicals heretofore issued as *The Market Reporter*, *The Monthly Crop Reporter*, and the *National Weather and Crop Bulletin*, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.

## SEPARATES.

**Imports and Exports of Agricultural Products.** Compiled by Nat C. Murray, Lewis B. Flohr, O. A. Juve, and Caroline G. Gries, Bureau of Agricultural Economics, from reports of the Bureau of Foreign and Domestic Commerce. Pp. 34. (Separate 880, Yearbook 1922.) Price, 5 cents.

**Statistics of Grain Crops, 1922.** Compiled by Nat. C. Murray, Lewis B. Flohr, O. A. Juve, Emma S. Thompson, Lila Thompson, Caroline G. Gries, John W. Strowbridge, and James J. Window, Bureau of Agricultural Economics. Pp. 97. (Separate 881, Yearbook 1922.) Price, 10 cents.



- Hog Production and Marketing.** By E. Z. Russell, S. S. Buckley, Bureau of Animal Industry; O. E. Baker, C. E. Gibbons, R. H. Wilcox, H. W. Hawthorne, S. W. Mendum, O. C. Stine, G. K. Holmes, A. V. Swarthout, Bureau of Agricultural Economics; W. B. Bell, Bureau of Biological Survey; G. S. Jamieson, Bureau of Chemistry; C. W. Warburton, Bureau of Plant Industry; C. F. Langworthy, States Relations Service. Pp. 100, figs. 56. (Separate 882, Yearbook 1922.) Price, 15 cents.
- The Year in Agriculture.** (Annual Report of the Secretary, 1922.) Pp. 82, figs. 21. (Separate 883, Yearbook 1922.) Price, 10 cents.
- Statistics of Crops Other Than Grain Crops, 1922.** Compiled by Nat. C. Murray, Lewis B. Flohr, O. A. Juve, Emma S. Thompson, Lila Thompson, Caroline G. Gries, Birdella Miller, M. E. Murphy, James J. Window, and Perry Elliott, Bureau of Agricultural Economics. Pp. 129. (Separate 884, Yearbook 1922.) Price, 15 cents.
- History and Status of Tobacco Culture.** By W. W. Garner and E. G. Moss, Bureau of Plant Industry; and H. S. Yohe, F. B. Wilkinson, and O. C. Stine, Bureau of Agricultural Economics. Pp. 74, figs. 28. (Separate 885, Yearbook 1922.) Price, 10 cents.
- Timber: Mine or Crop?** By W. B. Greeley, Earle H. Clapp, Herbert A. Smith, Raphael Zon, W. N. Sparhawk, Ward Shepard, and J. Kittredge, jr., Forest Service. Pp. 98, figs. 22. (Separate 886, Yearbook 1922.) Price, 15 cents.
- Miscellaneous Agricultural Statistics, 1922.** Compiled by Nat. C. Murray and Lewis B. Flohr, Bureau of Agricultural Economics, and Preston C. Day, Weather Bureau. Pp. 61. (Separate 887, Yearbook 1922.) Price, 10 cents.
- Live Stock, 1922.** Compiled by Nat. C. Murray, Lewis B. Flohr, O. A. Juve, Emma S. Thompson, Florence C. Fitch, Lila Thompson, and James J. Window, Bureau of Agricultural Economics. Pp. 119. (Separate 888, Yearbook, 1922.) Price, 15 cents.
- Forest Statistics.** By Louis S. Murphy, W. R. Mattoon, Harry Irion, Alice M. Meynes, and C. R. Tillotson, Forest Service. Pp. 17. (Separate 889, Yearbook 1922.) Price, 5 cents.
- Farm Operations.** Compiled by O. A. Juve, Bureau of Agricultural Economics. Pp. 33. (Separate 890, Yearbook 1922.) Price, 5 cents.
- Oats, Barley, Rye, Rice, Grain Sorghums, Seed Flax, and Buckwheat.** By C. R. Ball, T. R. Stanton, H. V. Harlan, C. E. Leighty, C. E. Chambliss, and A. C. Dillman, Bureau of Plant Industry; O. C. Stine, O. E. Baker, O. A. Juve, and W. J. Spillman, Bureau of Agricultural Economics. Pp. 100, figs. 64. (Separate 891, Yearbook 1922.) Price, 15 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review, Vol. 51, No. 4, April, 1923.** Pp. 175-237, pl. 1, figs. 23, charts 9. Price 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: The occurrence of lightning storms in relation to forest fires in California. By S. B. Shaw and E. I. Kotok.—Discussion of thunderstorms and forest fires in California. By E. A. Beals.—Forest-fire weather in the southern Appalachians. By E. F. McCarthy.—Solar radiation intensities and terrestrial weather. By C. F. Marvin.—Weather forecasting from ships at sea. By A. J. Henry.—Concerning the accuracy of free-air pressure maps. By C. L. Meisinger.—Cox on thermal belts and fruit growing in North Carolina. By A. J. Henry.—The rainfall of Jamaica. By A. J. Henry.

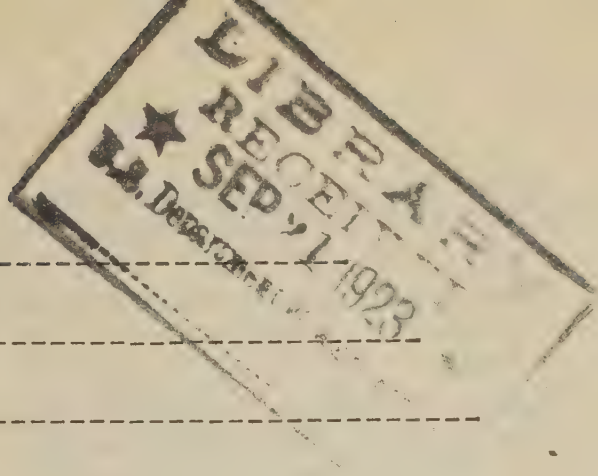
NOTE.—The Monthly Weather Review is sent *free* only to organizations and scientific institutions exchanging like courtesies, to libraries of and workers in agricultural colleges and experiment stations, to universities and other institutions of learning in which systematic courses of instruction in meteorology are offered, and to officials of the Government.

Single numbers will be supplied free so long as the bureau's supply lasts, and the Review can be obtained regularly from the Superintendent of Documents at the nominal price of \$1.50 per annum. Single copies may be had from the same source at 15 cents the copy.

EDWIN C. POWELL,  
*Acting Assistant in Charge of Publications.*



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United States Department of Agriculture,  
**MONTHLY LIST OF PUBLICATIONS.**

[August, 1923.]

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**FARMERS' BULLETINS—FOR FREE DISTRIBUTION.**

**NOTE.**—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Diseases, Ailments, and Abnormal Conditions of Swine.** By T. P. White, Assistant Chief, Division of Hog-Cholera Control, Bureau of Animal Industry. Pp. 26, figs. 8. June, 1923. (Farmers' Bulletin 1244.)

Suitable for general distribution.

**Parasites and Parasitic Diseases of Sheep.** By Maurice C. Hall, Zoological Division, Bureau of Animal Industry. Pp. 53, figs. 34. April, 1923. [August 1923.] (Farmers' Bulletin 1330.) Price, 10 cents.

This bulletin is a revision of and supersedes Farmers' Bulletin 1150.

**Home Tanning of Leather and Small Fur Skins.** By R. W. Frey, Associate Chemist, I. D. Clarke, Assistant Chemist, and F. P. Veitch, Chemist in Charge, Leather Investigations, Bureau of Chemistry. Pp. 29, figs. 9. August, 1923. (Farmers' Bulletin 1334.)

Suitable for general distribution.

**Culture of Citrus Fruits in the Gulf States.** By E. D. Vosbury, formerly Scientific Assistant, Office of Horticultural and Pomological Investigations, and T. Ralph Robinson, Crop Physiologist, Office of Crop Physiology and Breeding Investigations, Bureau of Plant Industry. Pp. 42, figs. 14. July, 1923. (Farmers' Bulletin 1343.)

**The Strawberry Rootworm as an Enemy of the Greenhouse Rose.** By C. A. Weigel, Entomologist, and C. F. Doucette, Junior Entomologist, Greenhouse Insect Investigations, Bureau of Entomology. Pp. 14, figs. 14. July, 1923. (Farmers' Bulletin 1344.)

Describes the strawberry rootworm in the four stages of its development, and gives an outline of measures to be used to control it when it appears in the rose house.



**Carpet Beetles and Their Control.** By E. A. Back, Entomologist in Charge of Stored-Product Insect Investigations, Bureau of Entomology. Pp. 14, figs. 13. July, 1923. (Farmers' Bulletin 1346.)

**Blackleg: Its Nature, Cause, and Prevention.** By John R. Mohler, Chief of the Bureau of Animal Industry. Pp. 13, figs. 3. June, 1923. (Farmers' Bulletin 1355.)

**Tobacco Hornworm Insecticide: Recommendations for Use of Powdered Arsenate of Lead in Dark-Tobacco District.** By A. C. Morgan, Entomologist, Southern Field Crop Insect Investigations, Bureau of Entomology. Pp. 8. June, 1923. (Farmers' Bulletin 1356.)

This bulletin is a revision of and supersedes Farmers' Bulletin 867.

**Milk and Its Uses in the Home.** Prepared by the Office of Home Economics, States Relations Service, with the cooperations of the Dairy Division, Bureau of Animal Industry. Pp. 20, figs. 2. July, 1923. (Farmers' Bulletin 1359.)

This bulletin is a revision of and supersedes Farmers' Bulletin 1207. It discusses milk as a food from the point of view of the consumer, and shows why it is exceptionally important in the diet of children and a valuable food for adults. Suggestions for the care and use of milk are also included, as well as directions for pasteurizing it at home.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**Accounting Records and Business Methods for Live-Stock Shipping Associations.** By Frank Robotka, Assistant, Iowa Agricultural Experiment Station, and Collaborator, Bureau of Agricultural Economics. Pp. 52. August 8, 1923. (Department Bulletin 1150.) Price, 10 cents.

**Coloring Satsuma Oranges in Alabama.** By R. C. Wright, Physiologist, Office of Horticultural and Pomological Investigations. Bureau of Plant Industry. Pp. 23, figs. 3. August 22, 1923. (Department Bulletin 1159.) Price, 5 cents.

#### CIRCULARS.

**The Australian Tomato Weevil Introduced in the South: (A Preliminary Account.)** By F. H. Chittenden, Entomologist in Charge, Truck-Crop Insect Investigations, Bureau of Entomology. Pp. 8, figs. 6. July 31, 1923. (Department Circular 282.) Price, 5 cents.

**Status and Results of Home Demonstration Work. Northern and Western States, 1921.** By Florence E. Ward, In Charge Extension Work with Women, Office of Extension Work, in the North and West, States Relations, Service. Pp. 26, figs. 7. July, 1923. (Department Circular 285.) Price, 5 cents.

**Agricultural Cooperation: A Selected and Annotated Reading List with Special Reference to Purchasing, Marketing, and Credit.** Compiled by Chastina Gardner, Junior Assistant in Market Information, Bureau of Agricultural Economics. Pp. 55. July, 1923. (Miscellaneous Circular 11.) Price, 10 cents.

Includes only works printed in English, and is exclusive of periodical references except reprints and proceedings of associations.

#### SERIALS.

**Journal of Agricultural Research, Vol. 24, No. 6. May 12, 1923. Contents:** Species of Rhizopus Responsible for the Decay of Sweet Potatoes in the Storage House and at Different Temperatures in Infection Chambers. (G-298.) By J. I. Lauritzen and L. L. Harter.—The Inheritance of Growth Habit and Resistance to Stem Rust in a Cross Between Two Varieties of Common Wheat. (G-299.) By Olaf S. Aamodt.—Effect of Organic Decomposition Products from High Vegetable Content Soils upon Concrete Drain Tile. (Minn. 46.) By G. R. B. Elliott.—Injury to Foliage by Arsenical Spray Mixtures. (Mont. 11.) By D. B. Swingle, H. E. Morris, and Edmund Burke. Pp. 441-558, pls. 10. Price, 10 cents.



Same, Vol. 24, No. 7. May 19, 1923. Contents: A statistical study of the comparative morphology of biologic forms of *Puccinia graminis*. (G-300.) By M. N. Levine.—Relation of certain soil factors to the infection of oats by loose smut. (G-301.) By Lucille K. Bartholomew and Edith Seymour Jones.—Influence of temperature, moisture, and oxygen on the spore germination of *Ustilago avenae*. (G-302.) By Edith Seymour Jones.—Influence of temperature on the spore germination of *Ustilago zeae*. (G-303.) By Edith Seymour Jones.—Spores in the upper air. (G-304.) By Elvin C. Stakman, Arthur W. Henry, Gordon C. Curran, and Warren N. Christopher.—Studies on the life history of stripe rust. *Puccinia glumarum* (Schm.) Erikss & Henn. (G-305.) By Charles W. Hungerford.—Influence of some nitrogenous fertilizers on the development of chlorosis in rice. (B-18.) By L. G. Wells and J. O. Carrero. Pp. 539-640, figs. 21, pls. 9. Price, 10 cents.

Same, Vol. 24, No. 8. May 26, 1923. Contents: Some Graminicolous Species of *Helminthosporium*: I. (G-306.) By Charles Drechsler.—Pp. 641-740, pls. 33. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, and volume 17 monthly. Beginning with volume 18 the issue was semimonthly. The publication of the Journal was suspended December 1, 1921, and no parts were issued for 1922. The Journal is now being published weekly, beginning January 6, 1923, with volume 23, No. 1. The Journal is distributed free only to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**The Official Record.** Vol. 2, Nos. 31 to 35, August 1, 15, 22, and 29, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. It can be subscribed to through the Office of the Superintendent of Documents, Government Printing Office, Washington, D. C., for 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.

**Weather, Crops, and Markets.** Vol. 4, Nos. 5 to 8, August 4, 11, 18, and 25, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as *The Market Reporter*, *The Monthly Crop Reporter*, and the *National Weather and Crop Bulletin*, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

Others desiring publication can purchase it from the Superintendent of Documents, the subscription price being \$1.00 a year. Address remittance to that official.

#### SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of Duval County, Florida.** By Arthur E. Taylor and T. J. Dunne-wald. Pp. 48, fig. 1, map. (From *F. O. Soils*, 1921.) Price, 25 cents.

#### SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Agricultural Economics.** No. 75. Official Wool Standards of the United States for Grades of Wool. May 7, 1923. Pp. 1-7. July 16, 1923. Price, 5 cents.

Same. No. 76. Revised Regulations for Cotton Warehouses, Approved May 29, 1923. Pp. 1-35. July, 1923. Price, 5 cents. Supersedes office of the Secretary circular 158.

Same. No. 77. Rules and Regulations of the Secretary of Agriculture Governing the Inspection of Hay under an Act of Congress Approved February 26, 1923. Pp. 6. [August, 1923.] Price, 5 cents.



- Bureau of Animal Industry.** No. 194. June, 1923. Pp. 53-59. July, 1923. Price, 5 cents.
- Bureau of Biological Survey.** No. 55. Migratory Bird Treaty, Act, and Regulations. Pp. 13. August 3, 1923. Price, 5 cents.
- Bureau of Chemistry.** No. 158. Notices of Judgment 11351-11400. July 28, 1923. Pp. 183-210. August 10, 1923. Price, 5 cents.
- Federal Horticultural Board.** No. 74. January-March, 1923. Pp. 56. June, 1923. Price, 10 cents.

## SEPARATES.

**The Dairy Industry.** By C. W. Larson, Bureau of Animal Industry; L. M. Davis, O. A. Juve, and O. C. Stine, Bureau of Agricultural Economics; A. E. Wight and A. J. Pistor, Bureau of Animal Industry; and F. C. Langworthy, States Relations Service. Pp. 98, figs. 54 (Separate 879, Yearbook 1922.) Price, 15 cents.

## PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

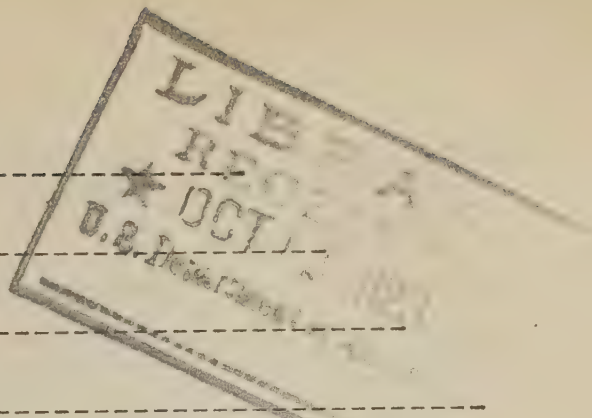
**Monthly Weather Review.** Vol. 51, No. 5. May, 1923. Pp. 239-290, pls. 2, figs. 18, charts 8. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles. A new form of thermoelectric recording pyrliometer. By H. H. Kimball and H. E. Hobbs.—Sunspots and terrestrial temperature in the United States. By A. J. Henry.—Some characteristics of Texas rainfall. By I. R. Tannehill.—Panama climate. By R. Z. Kirkpatrick.—Concerning halos of abnormal radii. By L. Besson.—Comments on halos of unusual radii. By W. J. Humphreys.—Winds and weather of central Greenland: Meteorological results of the Swiss Greenland Expedition. By C. F. Brooks.—Snowstorm of May 8-9, 1923, in Michigan. By B. B. Whittier.—Snowstorm of May 9, 1923, in the Saginaw Valley, Mich. By F. H. Coleman.—Tornado in Davidson County, Tenn., May 12, 1923. By R. M. Williamson.—Tornado at Little Rock, Ark., May 14, 1923. By H. S. Cole.—Small tornado at Thrall, Tex., May 14, 1923. By W. D. Fuller.—Torrential rains in extreme southeastern Texas. By E. Carson.—The Clonmel tornado of May 22, 1923. By J. W. Arnold.—Veering of backing winds as indicating the weather. By E. P. Jones.

EDWIN C. POWELL,  
*Acting Assistant in Charge of Publications.*



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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.

[September, 1923.]

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#### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

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**Marketing Main-Crop Potatoes.** By Wells A. Sherman, Specialist in Charge Fruit and Vegetable Division; George B. Fiske, Investigator in Marketing Fruits and Vegetables; and O. D. Miller, Scientific Assistant in Marketing, Bureau of Agricultural Economics. Pp. 37, pls. 16. August, 1923. (Farmers' Bulletin 1317.)

Discusses some of the underlying facts and conditions that influence prices, the sources and character of the information the grower should use, and the differing marketing problems of the producers of the main-crop. The location, shipping season, and relative importance of the heavy shipping districts are shown, with brief descriptions of the methods of marketing pursued in typical areas.

**Fumigation of Citrus Trees for Control of Insect Pests.** By R. S. Woglum, formerly Entomologist, Tropical and Subtropical Fruit Insect Investigations, Bureau of Entomology. Pp. 59, figs. 33. July, 1923. (Farmers' Bulletin 1321.) Price, 10 cents.

This bulletin supersedes Farmers' Bulletin 923, "Fumigation of Citrus Trees."

**Pruning Citrus Trees in the Southwest.** By A. D. Shamel, Physiologist; C. S. Pomeroy, Pomologist; and R. E. Caryl, Assistant Pomologist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 32, figs. 24. June, 1923. (Farmers' Bulletin 1333.)

**Controlling the Gipsy Moth and the Brown-Tail Moth.** By A. F. Burgess, Entomologist in Charge of Gipsy-Moth and Brown-Tail Moth Investigations, Bureau of Entomology. Pp. 28, figs. 15. July, 1923. (Farmers' Bulletin 1335.)

**Feeding and Management of Dairy Calves and Young Dairy Stock.** By W. K. Brainerd and H. P. Davis, Dairy Division, Bureau of Animal Industry. Pp. 18, figs. 7. June, 1923. (Farmers' Bulletin 1336.)

This bulletin is a revision of and supersedes Farmers' Bulletin 777 of the same title.

**Diseases of Poultry.** By Bernard A. Gallagher, Bacteriologist, Pathological Division, Bureau of Animal Industry. Pp. 41, figs. 15. July, 1923. (Farmers' Bulletin 1337.)

This bulletin supersedes Farmers' Bulletin 957, "Important Poultry Diseases."

**Polish and Poulard Wheats.** By John H. Martin, Agronomist in Western Wheat Investigations, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 10, figs. 3. July, 1923. (Farmers' Bulletin 1340.)

**Mule Production.** By J. O. Williams, Senior Animal Husbandman, Animal Husbandry Division, Bureau of Animal Industry. Pp. 28, figs. 24. August, 1923. (Farmers' Bulletin 1341.)

**Clothes Moths and Their Control.** By E. A. Back, Entomologist in Charge of Stored-Products Insect Investigations, Bureau of Entomology. Pp. 29, figs. 21. July, 1923. [September, 1923.] (Farmers' Bulletin 1353.)

Suitable for general distribution.



**Game Laws for the Season 1923-24.** A Summary of the Provisions of Federal, State, and Provincial Statutes. By Geo. A. Lawyer, Chief United States Game Warden, and Frank L. Earnshaw, Assistant, Interstate Commerce in Game, Division of Migratory-Bird Treaty and Lacey Acts, Bureau of Biological Survey. Pp. 70. September, 1923. (Farmers' Bulletin 1375.)

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**A Study of Decay in Douglas Fir in the Pacific Northwest.** By J. S. Boyce, Pathologist, Office of Investigations in Forest Pathology, Bureau of Plant Industry. Pp. 20, pls. 8. July 21, 1923. (Department Bulletin 1163.) Price, 10 cents.

**Cultivation of the True Yams in the Gulf Region.** By Robert A. Young, Plant Introducer, Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry. Pp. 16, pls. 10. August, 1923. (Department Bulletin 1167.) Price, 10 cents.

This bulletin points out the difference between the yam and the ordinary sweet potato, and discusses methods of growing and marketing the crop. Suitable for distribution in the South Atlantic and Gulf States.

**Wearing Qualities of Shoe Leathers.** By F. P. Veitch, R. W. Frey, and I. D. Clarke, Leather and Paper Laboratory, Bureau of Chemistry. Pp. 25, pls. 2, figs. 2. September 5, 1923. (Department Bulletin 1168.) Price — cents.

**Further Studies with Paradichlorobenzene for Peach-Borer Control, with Special Reference to Its Use on Young Peach Trees.** By Oliver I. Snapp, Entomologist, and Charles H. Alden, Scientific Assistant, Fruit Insect Investigations, Bureau of Entomology. Pp. 19, pls. 3, fig. 1. September 13, 1923. (Department Bulletin 1169.) Price, 5 cents.

**Effects of Different Systems and Intensities of Grazing upon the Native Vegetation at the Northern Great Plains Field Station.** By J. T. Sarvis, Assistant Agronomist, Office of Dry-Land Agriculture Investigations, Bureau of Plant Industry. Pp. 46, pls. 9, figs. 11. July, 1923. (Department Bulletin 1170.) Price, 15 cents.

**The Manufacture of Camembert Cheese.** By Kenneth J. Matheson, Dairy Manufacturing Specialist, and S. A. Hall, Scientific Assistant in Dairying, Dairy Division, Bureau of Animal Industry. Pp. 28, figs. 9. August 30, 1923. (Department Bulletin 1171.) Price, 5 cents.

**Cereal Experiments at Chico, California.** By Victor H. Florell, Assistant Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 34, figs. 5. August, 1923. (Department Bulletin 1172.) Price, 10 cents.

**Hungarian Vetch.** By Roland McKee, Agronomist, and H. A. Schoth, Assistant Agronomist, Office of Forage-Crop Investigations, Bureau of Plant Industry. Pp. 12, figs. 4. August, 1923. (Department Bulletin 1174.) Price, 5 cents.

**Grain-Sorghum Experiments at the Woodward Field Station in Oklahoma.** By John B. Sieglinger, Assistant Agronomist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 66, pls. 7, figs. 14. September, 1923. (Department Bulletin 1175.) Price, 15 cents.

This bulletin presents the data obtained from varietal, date-of-seeding, and spacing experiments with grain sorghums during the eight years from 1914 to 1921.

**Irrigation District Operation and Finance.** By Wells A. Hutchins, Assistant in Irrigation Economics, Division of Agricultural Engineering, Bureau of Public Roads. Pp. 56, figs. 5. September 22, 1923. (Department Bulletin 1177.) Price, 10 cents.

The conclusions and data presented in this bulletin are intended to disabuse the minds of uninformed investors who cling to the idea that all irrigation districts are unsound, and, at the same time, to be of value to State officials and to communities contemplating the formation of irrigation districts in pointing out what the experience of other communities has shown to be the essentials of success.

#### CIRCULARS.

**The Work of the Huntley Reclamation Project Experiment Farm in 1921.** By Dan Hansen, Farm Superintendent, Office of Western Irrigation Agriculture, Bureau of Plant Industry. Pp. 27, figs. 2. August, 1923. (Department Circular 275.) Price, 5 cents.

**Inspection of Milk Supplies.** By Ernest Kelly, In Charge, Market Milk Investigations, and C. S. Leete, Market Milk Specialist, Dairy Division, Bureau of Animal Industry. Pp. 37, figs. 10. July, 1923. (Department Circular 276.) Price, 10 cents.

**Kota Wheat.** By J. Allen Clark, Agronomist in Charge of Western Wheat Investigations, Bureau of Plant Industry, and L. R. Waldron, Plant Breeder, North Dakota Agricultural Experiment Station. Pp. 16, figs. 6. August, 1923. (Department Circular 280.) Price, 5 cents.

**Potato Brown-Rot.** By F. C. Meier and G. K. K. Link, Pathologists, Office of Cotton, Truck, and Forage Crop Disease Investigations, Bureau of Plant Industry. Pp. 6, figs. 2. August, 1923. (Department Circular 281.) Price, 5 cents.

**Livestock Poisoning by Cocklebur.** By C. Dwight Marsh, Physiologist in Charge, G. C. Roe, Assistant, and A. B. Clawson, Physiologist, Investigations of Stock Poisoning by Plants, Pathological Division, Bureau of Animal Industry. Pp. 4, figs. 2. August, 1923. (Department Circular 283.) Price, 5 cents.

**Importation and Inspection of Tea.** Pp. 12. August, 1923. (Miscellaneous Circular 9.) Price, 5 cents.

This circular contains the "act to prevent the importation of impure and unwholesome tea," approved March 2, 1897, and amended by the act approved May 16, 1908, and by the act of May 31, 1920, together with the regulations of the Secretary of Agriculture governing the enforcement of same. It is of interest to importers and dealers in tea and to the various officials intrusted with the carrying out of this act.

#### MISCELLANEOUS.

**Work and Expenditures of the Agricultural Experiment Stations, 1921.** Prepared by the Office of Experiment Stations, States Relations Service. Pp. 138. Price, 15 cents.



**Cold-Storage Holdings. Year Ending January, 1923, with Comparable Data for Earlier Years.** Prepared by the Bureau of Agricultural Economics. Pp. 32. September, 1923. (Statistical Bulletin 1.) Price, 5 cents.

#### SERIALS.

**Journal of Agricultural Research.** Vol. 24, No. 9. June 2, 1923. Contents: Control of Snow Molding in Coniferous Nursery Stock. (F-9.) By C. F. Korstian.—An Influence of Moisture on Bean Wilt. (G-307.) By L. T. Leonard.—The Pseudo-Antagonism of Sodium and Calcium in Dilute Solutions. (Calif.-34.) By H. S. Reed and A. R. C. Haas.—Influence of the Hydrogen-Ion Concentration on the Growth and Fixation of Nitrogen by Cultures of *Azotobacter*. (Kans.-35.) By P. L. Gainey and H. W. Batchelor.—Sunflower Investigations. (Idaho-6.) By Ray E. Neidig and Robert S. Snyder.—Effect of Different Concentrations of Manganese Sulphate on the Growth of Plants in Acid and Neutral Soils and the Necessity of Manganese as a Plant Nutrient. (Ky.-12.) By J. S. McHargue.—Sweet Clover Investigations. (Idaho-7.) By Ray E. Neidig and Robert S. Snyder.—Growth and Composition of Orange Trees in Sand and Soil Cultures. (Calif.-35.) By H. S. Reed and A. R. C. Haas. Pp. 741-814, pls. 14, fig. 1. Price, 10 cents.

**Same.** Vol. 24, No. 10. June 9, 1923. Contents: Further Studies on the Inheritance of "Rogue" Types in Garden Peas (*Pisum sativum* L.) (G-308.) By Wilber Brotherton, Jr.—A Method of Treating Maize Seed to Destroy Adherent Spores of Downy Mildew. (G-309.) By William H. Weston, Jr.—Influence of the Substrate and Its Hydrogen-Ion Concentration on Pectinase Production. (G-310.) By L. L. Harter and J. L. Weimer.—The Microscopic Estimation of Colloids in Soil Separates. (H-7.) By William H. Fry. Pp. 815-883, pls. 8, figs. 4. Price, 10 cents.

**Same.** Vol. 24, No. 11. June 16, 1923. Contents: Morphology and Host Relations of *Pucciniastrum americanum*. (G-311.) By B. O. Dodge.—Watery-Rot of Tomato Fruits. (G-312.) By Fred J. Pritchard and W. S. Porte.—Influence of the Absolute Reaction of a Soil upon Its *Azotobacter* Flora and Nitrogen Fixing Ability. (Kans.-36.) By P. L. Gainey.—A Study of Factors Affecting the Nitrogen Content of Wheat and of the Changes that Occur During the Development of Wheat. (Wash.-3.) By George A. Olson.—Relative Susceptibility of Citrus Fruits and Hybrids to *Cladosporium citri* Masee. (Ala.-8.) By G. L. Peltier and W. J. Frederick.—An Improved Method for the Determination of Nicotine in Tobacco and Tobacco Extracts. (Ky.-13.) By O. M. Shedd.—Nutritive Value of Mixtures of Proteins from Corn and Various Concentrates. (E-21.) By D. Breese Jones, A. J. Finks, and Carl O. Johns. Pp. 885-978, pls. 8, figs. 10. Price, 10 cents.

**Same.** Vol. 24, No. 12. June 23, 1923. Contents: The Mode of Inheritance of Resistance to *Puccinia graminis* with Relation to Seed Color in Crosses Between Varieties of Durum Wheat. (G-313.) By J. B. Harrington and O. S. Aamodt.—A Study of Rust Resistance in a Cross Between Marquis and Kota Wheats. (G-314.) By H. K. Hayes and O. S. Aamodt.—Biologic Forms of *Puccinia graminis* of Varieties of *Avena* Spp. (G-315.) By E. C. Stalkman, M. N. Levine, and D. L. Bailey.—Disease Resistance of Onion Smudge. (G-316.) By J. C. Walker.—The Effect of Respiration upon the Protein Percentage of Wheat, Oats, and Barley. (Minn.-47.) By F. W. McGinnis and G. S. Taylor. Pp. 979-1048, pls. 19, figs. 4. Price, 10 cents.

**Same.** Vol. 25, No. 1. July 7, 1923. Contents: Work and Parasitism of the Mediterranean Fruit Fly in Hawaii during 1919 and 1920. (K-108.) By H. F. Willard.—Acid Production by *Rhizopus tritici* in Decaying Sweet Potatoes. (G-317.) By H. A. Edson.—Temperature Effects in Plant Metabolism. (Wis.-21.) By W. R. Tottingham.—*Platygaster vernalis* Myers, an Important Parasite of the Hessian Fly. (K-109.) By Charles C. Hill. Pp. 1-42, pls. 8, figs. 9. Price, 10 cents.

**Same.** Vol. 25, No. 2. July 14, 1923. Contents: Transmission, Variation, and Control of Certain Degeneration Diseases of Irish Potatoes. (G-318.) By E. S. Schultz and Donald Folsom. Pp. 43-118, pls. 15. Price, 10 cents.

**Same.** Vol. 25, No. 3. July 21, 1923. Contents: Some Relations of the Crown Gall Organism to Its Host Tissue. (Wis.-22.) By A. J. Riker.—Oxygen-Supplying Power of the Soil as Indicated by Color Changes in Alkaline Pyrogallol Solution. (G-319.) By Lee M. Hutchins and Burton E. Livingston.—Bacterial Spot of Lima Bean. (Wis.-23.) By W. B. Tisdale and Maude Miller Williamson.—Hydrogen-Ion Changes Induced by Species of *Rhizopus* and by *Botrytis cinerea*. (G-320.) By J. L. Weimer and L. L. Harter. Pp. 119-164, pls. 9. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the *Journal of Agricultural Research* were published monthly, volumes 5 to 16 weekly, volume 17 monthly, volumes 18 to 21 semimonthly, and volume 22 weekly. The publication of the *Journal* was suspended December 1, 1921, volume 22, No. 9 being the last issue, and no parts were issued for 1922. The *Journal* is now being published weekly, beginning January 6, 1923, with volume 23, No. 1. The *Journal* is distributed free only to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

**Experiment Station Record.** Vol. 49, No. 1. July, 1923. Pp. 1-100. Price, 10 cents.

**Same.** Vol. 49, No. 2. August, 1923. Pp. 101-200. Price, 10 cents.

NOTE.—The *Record* is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.

**The Official Record.** Vol. 2, Nos. 36 to 39, September 5, 12, 19, and 26, 1923.

This publication carries official announcements and information concerning the work of the department in general and of the various bureaus. Its free distribution is confined to employees and cooperators of the department. It can be subscribed to through the Office of the Superintendent of Documents, Government Printing Office, Washington, D. C., for 50 cents per year (foreign, \$1.10). Remittance should be addressed to the above-mentioned official.



**Weather, Crops, and Markets.** Vol. 4, Nos. 9 to 13, September 1, 8, 15, 22, and 29, 1923.

This publication is issued weekly and combines three important regular periodicals heretofore issued as *The Market Reporter*, *The Monthly Crop Reporter*, and the *National Weather and Crop Bulletin*, and which has been discontinued. The free distribution is restricted to individuals and institutions who are assisting the department in disseminating information connected with agriculture.

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**SOIL SURVEYS.**

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

**Soil Survey of the Bernardsville Area, New Jersey.** By Austin L. Patrick and E. B. Deeter, of the U. S. Department of Agriculture, and C. C. Engle and L. L. Lee, of the Department of Conservation and Development of New Jersey. Pp. 60, pls. 3, fig. 1, map. (From *F. O. Soils*, 1919.) Price, 25 cents.

**Soil Survey of Emmet County, Iowa.** By D. S. Gray, of the Iowa Agricultural Experiment Station, and F. W. Reich, of the U. S. Department of Agriculture. Pp. 35, fig. 1, map. (From *F. O. Soils*, 1920.) Price, 15 cents.

**Soil Survey of Erath County, Texas.** By T. M. Bushnell, of the Texas Agricultural Experiment Station, and H. W. Hawker and D. B. Pratapas, of the Department of Agriculture. Pp. 38, fig. 1, map. (From *F. O. Soils*, 1920.) Price, 25 cents.

**Soil Survey of Josephine County, Oregon.** By A. E. Kocher, of the U. S. Department of Agriculture, and E. F. Torgerson, of the Oregon Agricultural Experiment Station. Pp. 60, pls. 3, fig. 1, map. (From *F. O. Soils*, 1919.) Price, 25 cents.

**Soil Survey of Smith County, Mississippi.** By W. E. Tharp and William De Young. Pp. 48, fig. 1, map. (From *F. O. Soils*, 1920.) Price, 15 cents.

**Soil Survey of St. Joseph County, Michigan.** By L. C. Wheeting and S. G. Bergquist, of the Michigan Agricultural Experiment Station. Pp. 24, pls. 4, figs. 2, map. (From *F. O. Soils*, 1921.) Price, 15 cents.

**Soil Survey of Wayne County, New York.** By Cornelius Van Duyne and N. M. Kirk, of the U. S. Department of Agriculture, and William Seltzer, John P. Gum, and H. W. Erde, of the New York State College of Agriculture. Pp. 76, fig. 1, map. (From *F. O. Soils*, 1919.) Price, 25 cents.

**SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.**

These contain *only* information, instruction, and notices governing the enforcement of the food and drugs act, meat inspection, 28-hour, and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only* at prices noted.

**Bureau of Agricultural Economics.** No. 78. Rules and Regulations of the Secretary of Agriculture Governing the Inspection and Certification of Fruits, Vegetables, and Other Products. February 26, 1923. Pp. 6. September, 1923. Price, 5 cents.

**Same.** No. 79. Rules and Regulations of the Secretary of Agriculture Governing the Inspection and Certification of Butter, Cheese, and Eggs. February 26, 1923. Pp. 8. September, 1923. Price, 5 cents.

**Bureau of Animal Industry.** No. 195. July, 1923. Pp. 61–68. August, 1923. Price, 5 cents.

**Same.** No. 196. August, 1923. Pp. 69–75. September, 1923. Price, 5 cents.

**Bureau of Biological Survey.** No. 56. Regulations for the Protection of Land Fur-Bearing Animals in Alaska. Pp. 4. September, 1923. Price, 5 cents.

**Same.** No. 57. Hunting Migratory Game Birds on Cold Springs Reservation, Oreg. Pp. 1. September, 1923. Price, 5 cents.

**Federal Horticultural Board.** No. 75. April–June, 1923. Pp. 57–98. September, 1923. Price, 10 cents.

**PUBLICATIONS OF THE WEATHER BUREAU.**

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 51, No. 6. June, 1923. Pp. 291–344, pls. 2, figs. 11, charts 10. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: Rainfall interpolation. By R. E. Horton.—Concerning the relation between the duration, intensity, and the periodicity of rainfall. By P. P. Gorbachev.—City planning and the prevailing winds. By C. J. Root.—Stimulus and conservation of energy as bases of medical climatology. By F. Baur.—Fata Morgana on the Nagyhor-tobagy. By A. Rethly.—Mirage in Lower California. By J. H. Gordon.—Small tornadoes near Cheyenne, Wyo. By G. W. Pitman.—Tornadoes in New Mexico, June, 1923. By C. E. Linney.—Tornado at Roswell, N. Mex. By C. Hallenbeck.—Dust fall at Ludington, Mich., March 25, 1923. By C. H. Eshleman.—Heavy rains in southern Kansas, June, 1923. By A. J. Henry.

**NOTE.**—The *Monthly Weather Review* is sent *free* only to organizations and scientific institutions exchanging like courtesies, to libraries of and workers in agricultural colleges and experiment stations, to universities and other institutions of learning in which systematic courses of instruction in meteorology are offered, and to officials of the Government.

Single numbers will be supplied free so long as the bureau's supply lasts, and the Review can be obtained regularly from the Superintendent of Documents at the nominal price of \$1.50 per annum. Single copies may be had from the same source at 15 cents the copy.

L. J. HAYNES,

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## United States Department of Agriculture, MONTHLY LIST OF PUBLICATIONS.

[October, 1923.]

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After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

#### FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—As long as the department's somewhat limited supply of the current numbers of Farmers' Bulletins lasts they may be obtained by all applicants free of charge. They are also for sale at 5 cents per copy unless otherwise noted.

**Hog Lice and Hog Mange. Methods of Control and Eradication.** By Marion Imes, Veterinary Inspector, Zoological Division, Bureau of Animal Industry. Pp. 28, figs. 11. Revised, September, 1923. (Farmers' Bulletin 1085.)

Suitable for general distribution.

**Feeding Cottonseed Products to Livestock.** By E. W. Sheets, Senior Animal Husbandman in Beef Cattle Investigations, and E. H. Thompson, Formerly Scientific Assistant in Beef Cattle Investigations, Animal Husbandry Division, Bureau of Animal Industry. Pp. 19, figs. 3. Revised September, 1923. (Farmers' Bulletin 1179.)

**Dairy-Barn Construction.** By K. E. Parks, Dairy Engineer, Dairy Division, Bureau of Animal Industry. Pp. 22, figs. 17. October, 1923. (Farmers' Bulletin 1342.)

Presents principal features of modern dairy-barn construction and equipment, together with practical plans for various types and sizes of barns.

**Standard Varieties of Chickens: The American Class.** By Rob. R. Slocum, formerly of the Animal Husbandry Division, Bureau of Animal Industry. (Revised by Alfred R. Lee, Poultryman, Animal Husbandry Division.) Pp. 18, figs. 17. July, 1923. (Farmers' Bulletin 1347.)

This bulletin is a revision of and supersedes Farmers' Bulletin 806 of the same title.

**The Corrugation Method of Irrigation.** By James C. Marr, Irrigation Engineer, Division of Agricultural Engineering, Bureau of Public Roads. Pp. 24, figs. 25. August, 1923. (Farmers' Bulletin 1348.)

This bulletin describes the most approved practices to be followed when the corrugation method of irrigation is employed and points out its advantages and limitations.

**Increasing the Potato Crop Spraying.** By F. H. Chittenden, Entomologist, Truck-Crop Insect Investigations, Bureau of Entomology, and W. A. Orton, Pathologist in Charge of Cotton, Truck, and Forage-Crop Disease Investigations, Bureau of Plant Industry. Pp. 22, figs. 23. October, 1923. (Farmers' Bulletin 1349.)

This bulletin is a revision of and supersedes Farmers' Bulletin 868, "How to Increase Potato Crop by Spraying."



**Cabbage Diseases.** By L. L. Harter, Pathologist, Office of Cotton, Truck, and Forage-Crop Disease Investigations, and L. R. Jones, Collaborator of the Bureau of Plant Industry and Plant Pathologist of the Wisconsin Agricultural Experiment Station. Pp. 23, figs. 14. September, 1923. (**Farmers' Bulletin 1351.**)

This bulletin is a revision of and supersedes Farmers' Bulletin 925 of the same title.

**The Tobacco Flea-Beetle in the Southern Cigar-Wrapper District.** By F. S. Chamberlin, Assistant Entomologist, and J. N. Tenhet, Junior Entomologist, Southern Field-Crop Insect Investigations, Bureau of Entomology. Pp. 10, figs. 8. July, 1923. (**Farmers' Bulletin 1352.**)

Discusses the life history, seasonal habits, and natural enemies of the tobacco flea-beetle, and suggests methods of control.

**The Yellow-Fever Mosquito.** By L. O. Howard, Chief of the Bureau of Entomology. Pp. 14, figs. 6. October, 1923. (**Farmers' Bulletin 1354.**)

This bulletin is a revision of and supersedes Farmers' Bulletin 547 of the same title.

#### DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free as long as the supply lasts to persons who can use such specialized information.

**A Method for Preparing a Commercial Grade of Calcium Arsenate.** By J. K. Haywood, Chief, Miscellaneous Division, and Chairman Insecticide and Fungicide Board, and C. M. Smith, Assistant Chemist, Bureau of Chemistry. Pp. 10. Revised, September, 1923. (**Department Bulletin 750.**) Price, 5 cents.

Of interest to manufacturers of insecticides and fungicides.

**The Rôle of the Genus *Rhizinus* in the Dissemination of Crown Rust.** By S. M. Dietz, Assistant Pathologist, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 19, figs. 8. September, 1923. (**Department Bulletin 1162.**) Price, 5 cents.

A technical discussion of the subject. Of interest to plant pathologists and investigators.

**Experiments in Wheat Production on the Dry Lands of the Western United States.** By David E. Stephens, Superintendent Sherman County Branch Station, Moro, Oreg., and Agronomist, Office of Cereal Investigations; Max A. McCall, Superintendent Adams Branch Station, Lind, Wash., and formerly Agent, Office of Cereal Investigations; and Aaron F. Bracken, Superintendent Nephi Substation, Nephi, Utah, and formerly Scientific Assistant, Office of Cereal Investigations, Bureau of Plant Industry. Pp. 60, figs. 22. September, 1923. (**Department Bulletin 1173.**) Price, 10 cents.

#### CIRCULARS.

**Crop Tests at the Cooperative Testing Station, Sacaton, Ariz.** By C. J. King, Assistant, Office of Crop Acclimatization and Adaptation Investigations, Bureau of Plant Industry. Pp. 40, figs. 27. September, 1923. (**Department Circular 277.**) Price, 10 cents.

**The Chayote: Its Culture and Uses.** By L. G. Hoover, formerly Assistant Plant Introducer, Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry. Pp. 11, pls. 4, figs. 4. September 28, 1923. (**Department Circular 286.**) Price, 5 cents.

**Commercial Control of Citrus Stem-End Rot.** By John R. Winston, Pathologist, Harry R. Fulton, Pathologist, and John J. Bowman, Junior Pathologist, Office of Fruit-Disease Investigations, Bureau of Plant Industry. Pp. 10, figs. 7. October, 1923. (**Department Circular 293.**) Price, 5 cents.

**The Rat Mite Attacking Man.** By F. C. Bishopp, Entomologist, Bureau of Entomology. Pp. 4. October, 1923. (**Department Circular 294.**) Price, 5 cents.

**Basic Grading Rules and Working Stresses for Structural Timbers.** As Recommended by the Department of Agriculture. By J. A. Newlin, In Charge Section of Timber Mechanics, and R. P. A. Johnson, Engineer in Forest Products, Forest Products Laboratory, Forest Service. Pp. 23. October, 1923. (**Department Circular 295.**) Price, 5 cents.



Standard Grading Specifications for Yard Lumber. As Recommended by the Department of Agriculture. By Edward P. Ivory, Associate Wood Technologist, David G. White, Forest Examiner, and Arthur T. Upson, In Charge, Section of Industrial Investigations, Forest Products Laboratory, Forest Service. Pp. 75, pls. 22, chart. October, 1923. (Department Circular 296.) Price, 20 cents.

The Eelworm Disease; A Menace to Alfalfa in America. By G. H. Godfrey, Office of Cotton, Truck, and Forage-Crop Disease Investigations, Bureau of Plant Industry. Pp. 8, figs. 4. (Department Circular 297.) Price, 5 cents.

#### MISCELLANEOUS.

Information for Prospective Settlers in Alaska. By C. C. Georgeson, Agronomist in Charge. Pp. 18, pls. 6, map. Revised, October 15, 1923. (Alaska Agricultural Experiment Stations Circular 1.) Price, 10 cents.

#### SERIALS.

Journal of Agricultural Research. Vol. 25, No. 4. July 28, 1923. Contents: Growth-Promoting Value of the Proteins of the Palm Kernel and the Vitamin Content of Palm-Kernel Meal. (E-22.) By A. J. Finks and D. Breese Jones.—Efficiencies of Phosphatic Fertilizers as Affected by Liming and by the Length of Time the Phosphates Remained in Porto Rican Soils. (B-19.) By P. L. Gile and J. O. Carrero.—Growth of Fruiting Parts in Cotton Plants. (G-321.) By R. D. Martin, W. W. Ballard, and D. M. Simpson. Pp. 165-208, pls. 2, figs. 6. Price, 10 cents.

Same. Vol. 25, No. 5. August 4, 1923. Contents: Systematic Infections of Rubus with the Orange Rusts. (G-322.) By B. O. Dodge.—Resistance in Rye to Leaf Rust, Puccinia dispersa Erikss. (G-323.) By E. B. Mains and C. E. Leighty.—An Undescribed Orange Pest from Honduras. (K-110.) By A. C. Baker. Pp. 209-254, pls. 11, figs. 7. Price, 10 cents.

Same. Vol. 25, No. 6. August 11, 1923. Contents: Correlation of Foliage Degeneration Diseases of the Irish Potato with Variations of the Tuber Sprout. (Vt.-2.) By Alfred H. Gilbert.—Comparative Study of Phytophthora faberi on Coconut and Cacao in the Philippine Islands. (G-324.) By Otto A. Reinking. Pp. 255-284, pls. 18, figs. 5. Price, 10 cents.

Same. Vol. 25, No. 7. August 18, 1923. Contents: Quantitative Variation of Gossypol and Its Relation to the Oil Content of Cottonseed. (E-23.) By Erich W. Schwartze and Carl L. Alsberg.—Inheritance of Dwarfing Maize. (G-325.) By J. H. Kempton.—Determination of Sulphur Compounds in Dry Lime-Sulphur. (Mass.-9.) By Carleton Parker Jones. Pp. 285-336, pls. 5, figs. 12. Price, 10 cents.

Same. Vol. 25, No. 8. August 25, 1923. Contents: The Twinning and Monembryonic Development of Platygaster hiemalis, a Parasite of the Hessian Fly. (K-111.) By R. W. Leiby and C. C. Hill.—Pathogenicity of Ophiobolus cariceti in Its Relationship to Weakened Plants. (Ark.-4.) By H. R. Rosen and J. A. Elliott.—The Pharynx and Alimentary Canal of the Hookworm Larva-Necator americanus. (G-326.) By N. A. Cobb. Pp. 337-358, pls. 11. Price, 10 cents.

NOTE.—Volumes 1 to 4 of the Journal of Agricultural Research were published monthly, volumes 5 to 16 weekly, volume 17 monthly, volumes 18 to 21 semimonthly, and volume 22 weekly. The publication of the Journal was suspended December 1, 1921, volume 22, No. 9 being the last issue, and no parts were issued for 1922. The Journal is now being published weekly, beginning January 6, 1923, with volume 23, No. 1. The Journal is distributed free only to libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication. The domestic price is \$4 per year and the foreign price \$5.25 per year.

Experiment Station Record. Vol. 49, No. 3. Abstract Number. October 6, 1923. Pp. 201-300. Price, 10 cents.

Same. Vol. 49, No. 4. September, 1923. Pp. 301-400. Price, 10 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture, issued in 2 volumes a year, 10 numbers each. Its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. The subscription price is 75 cents a volume (foreign subscriptions \$1.25 a volume), payable to the Superintendent of Documents, Government Printing Office, Washington, D. C.



**The Official Record.** Vol. 2, Nos. 40 to 44, October 3, 10, 17, 24, and 31, 1923.

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**Weather, Crops, and Markets.** Vol. 4, Nos. 14 to 17, October 6, 13, 20, and 27, 1923.

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#### SOIL SURVEYS.

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**Soil Survey of Rockdale County, Georgia.** By A. H. Meyer, of the Georgia State College of Agriculture. Pp. 17, figs. 2, map. (From *F. O. Soils*, 1920.) Price, 15 cents.

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**Bureau of Agricultural Economics.** No. 80. Regulations of the Secretary of Agriculture under the United States Cotton Standards Act. Effective August 1, 1923. Pp. 1-21. [October 25, 1923.] Price, 5 cents.

**Bureau of Animal Industry.** No. 197. September, 1923. Pp. 77-84. October, 1923. Price, 5 cents.

**Bureau of Chemistry, No. 159.** Notices of Judgment 11401-11450. September 4, 1923. Pp. 211-244. October 4, 1923. Price, 5 cents.

**Same.** No. 160. Notices of Judgment 11451-11500. September 21, 1923. Pp. 245-271. September 21, 1923. Price, 5 cents.

**Same.** No. 161. Notices of Judgment 11501-11550. October 9, 1923. Pp. 273-300. Price, 5 cents.

#### PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

**Monthly Weather Review.** Vol. 51, No. 7. July, 1923. Pp. 345-381, figs. 7, charts 8. Price, 15 cents a copy, \$1.50 a year, payable to the Superintendent of Documents.

Special articles: Influence of Gulf water surface temperature on Texas weather. By I. R. Tannehill.—Accuracy of areal rainfall estimates. By R. E. Horton.—Rainfall duration and intensity in India. By R. E. Horton.—Are we having less snowfall? By C. J. Root.—The national elimination balloon race from Indianapolis, Ind., July 4, 1923. By L. T. Samuels.—Lightning fatality. By E. R. Miller.

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L. J. HAYNES,  
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